

Capacitor Shortform

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[Http://www.100y.com.tw](http://www.100y.com.tw)

A large, stylized graphic consisting of the words "NO OVER" in a bold, blocky font. The letters are white with a thick green outline. The text is arranged in a way that "NO" is on the left and "OVER" is on the right, with the "O" in "NO" overlapping the "O" in "OVER". The graphic is set against a background of various electronic components, including capacitors and integrated circuits, which are slightly blurred and faded.

Anglia



ELECTROLYTIC CAPACITORS

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TANTALUM CAPACITORS

65

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1. Polarity

An electrolytic capacitor is a polarised component. If used in reverse polarity, the life may be reduced or the capacitor may become a short circuit and explode. Where the polarity of a circuit is sometimes reversed, a bi-polar capacitor should be used. However, the bi-polar capacitor must not be used for AC voltage applications.

2. Voltage

Do not apply voltage exceeding the rated voltage of the capacitor. The capacitor may be damaged and the leakage current increased causing the capacitor's life to be reduced. Surge voltages can only be applied for short periods.

When AC voltage is superimposed onto DC voltage, the sum of the DC voltage and the peak AC voltage should not exceed the full rated voltage of the capacitor.

3. Ripple Current

Maximum permissible ripple current is specified for the individual types. Do not apply excessive ripple current, this will reduce the life expectancy due to temperature rise causing gas to be generated.

Electrolytic capacitors with high ripple current capability are available within the range.

4. Operating Temperature

Use well within the stated operating temperature of the component. Increasing temperature causes a rise in leakage current and capacitance, whilst ESR reduces. At lower frequencies, ripple current will cause heat to be generated due to an increase in ESR.

When the operating temperature is increased by 10°C, the capacitor's life is reduced by 50%.

5. Charge and Discharge

When general purpose electrolytic capacitors are used in rapid charge and discharge applications, the life expectancy may be reduced by capacitance decrease, heat rise, etc. Please contact our technical department or agent if you have any special requirements. We will do our best to meet your needs.

6. Insulation and PCB Mounting (through hole only)

(a) The aluminium case of electrolytic capacitors is not insulated from the cathode due to an undefined resistance of electrolyte between them. Although the case is ordinarily covered with PVC (Polyvinyl Chloride) this sleeve is for marking purposes only and not intended for electrical insulation. If complete insulation of the case is necessary, add an insulator during assembly.

(b) Mount the capacitor on the PCB so that there are no conductive circuit patterns under the capacitor.

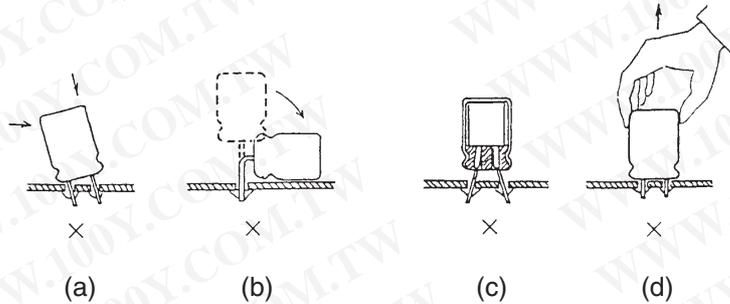
7. Vent (through hole & lug/screw terminal types only)

Please note that this is a safety feature. In the unlikely event of it being used, it requires a small amount of clearance, not less than 5mm for 40mm dia. parts, dropping to not less than 2mm for the smaller can sizes.

8. External Stress (through hole only)

Excessive force or stress to terminals or lead wires of capacitors should be prevented. Stresses such as pulling, pushing, bending etc. will damage the capacitors causing high leakage current, leakage of electrolyte and in the worst case open / short circuit.

The following are typical examples of stresses to avoid imposing on capacitors.



- (a) Tilting a capacitor after soldering.
- (b) Bending a capacitor after soldering.
- (c) Forcing terminals into incompatible pitches on the PCB.
- (d) Picking up the PCB by holding the capacitor.

9. Preheat and Soldering Temperature

When the preheat or soldering temperature is too high and the soldering time is too long, it affects the capacitor's operating characteristics. On through hole devices, the PVC sleeve may also split or shrink, especially, when a thin PCB or a through-board is used. Additionally, do not locate copper tracks under through hole capacitors on the PCB as the temperature of the track is increased by the preheating and soldering and the sleeve may be affected. Repeatedly confirm that the capacitor does not have any damage, before actual use.

Manual Soldering	Wave Soldering	Reflow Soldering	PCB Cleaning
350°C for 3s max.	Pre-heat to 160°C for 120s max. Solder at 240°C for 5s max.	Pre-heat to 160°C for 120s max. Reflow time of 20s with peak temperature of 230°C for 5s max.	Immersion or ultrasonically clean for 5m/60°C max. Use alcohol, terpene or water based solvents. Rinse & dry pcb.

10. Storage

Care must be taken if the electrolytic capacitors are stored in a high ambient temperature environment, without applied voltage, for an extended length of time (typically years). Under these conditions, the leakage current is liable to increase to unwanted levels when the rated voltage is finally applied. This is a common occurrence with electrolytic capacitors and in no way implies a faulty component. In these circumstances, it is possible to re-form the capacitor by gradually increasing the applied voltage. Consult our technical department or agent for advice.

RADIAL PART No. KEY



RE

RANGE
RE = General Purpose
RH = General Purpose, 105°C
R7 = Sub-Miniature
RJ = Sub-Miniature, 105°C
R5 = Ultra Miniature
LL = Low Leakage
RL = Low ESR, 105°C
RX = Low ESR/Long Life, 105°C
RB = Bi-Polar
BD = Bi-Polar, 105°C

1J

VOLTAGE
0G = 4V
0J = 6.3V
1A = 10V
1C = 16V
1D = 20V
1E = 25V
1V = 35V
1G = 40V
1H = 50V
1J = 63V
1K = 80V
2A = 100V
2B = 125V
2C = 160V
2D = 200V
2E = 250V
2F = 315V
2U = 330V
2V = 350V
2G = 400V
2W = 450V

100

VALUE
0R1 = 0.1µF
R22 = 0.22µF
R33 = 0.33µF
R47 = 0.47µF
010 = 1.0µF
2R2 = 2.2µF
3R3 = 3.3µF
4R7 = 4.7µF
100 = 10µF
220 = 22µF
330 = 33µF
470 = 47µF
101 = 100µF
221 = 220µF
331 = 330µF
471 = 470µF
102 = 1000µF
222 = 2200µF
332 = 3300µF
472 = 4700µF
103 = 10000µF
223 = 22000µF
 etc

M

TOLERANCE
M = ±20%
K = ±10%
R = 0, +20%
V = -10, +20%
T = -10, +50%

A

CAN SIZE
 see table below

E

PITCH
A = 1.5mm
B = 2.0mm
C = 2.5mm
D = 3.5mm
E = 5.0mm
F = 7.5mm

T

LEAD STYLE & PACKAGING
LOOSE (bulk packed)
 Blank = Natural pitch, full length
C = Cropped
F = Cropped & formed
M = Snap-in
W = Twisted & formed
TAPED
T = Taped & boxed
R = Taped & reeled

CAN SIZE
 Dia. x L (mm)

A = 5 x 11	A1 = 16 x 15	C7 = 14.5 x 41
B = 6.3 x 11	A2 = 16 x 20	C8 = 14.5 x 49
C = 8 x 11.5	A3 = 16 x 35.5	C9 = 14.5 x 53
D = 10 x 12.5	A4 = 16 x 40	D1 = 16 x 28
E = 10 x 16	A5 = 18 x 15	D2 = 16 x 34
F = 10 x 20	A6 = 18 x 20	D3 = 16 x 37
G = 12.5 x 20	A7 = 18 x 25	D4 = 16 x 43
H = 12.5 x 25	A8 = 18 x 31.5	D5 = 16 x 49
J = 4 x 7	A9 = 18 x 40	D6 = 18 x 27
K = 5 x 7	B1 = 11 x 32	D7 = 18 x 28
M = 6.3 x 7	B2 = 11 x 40	D8 = 18 x 29
P = 16 x 25	B3 = 11 x 48	D9 = 18 x 34
Q = 8 x 15	B4 = 11 x 55	E1 = 18 x 37
R = 16 x 31.5	B5 = 12 x 27	E2 = 18 x 47
S = 8 x 20	B6 = 12.5 x 32	E3 = 20 x 30
T = 10 x 25	B7 = 12.5 x 43	E4 = 20 x 32
U = 10 x 30	B8 = 12.5 x 49	E5 = 20 x 35
V = 18 x 35.5	B9 = 12.5 x 53	E6 = 20 x 41
W = 12.5 x 15	C1 = 14 x 46	F1 = 4 x 5
X = 12.5 x 30	C2 = 14.5 x 25	F2 = 5 x 5
Y = 12.5 x 35.5	C3 = 14.5 x 29	F3 = 6.3 x 5
Z = 12.5 x 40	C4 = 14.5 x 33	
	C5 = 14.5 x 37	
	C6 = 14.5 x 39	

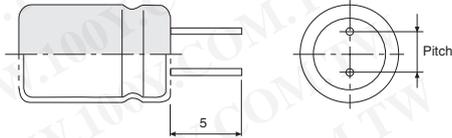
example shown **RE1J100MAET** - General purpose, radial electrolytic 10µF 63V ±20% size 5mm dia x 11mm length, pre-formed leads 5mm pitch supplied taped and boxed



As part of our commitment to providing customers with the widest choice of Nover product we are able to offer a complete range of options on all ranges of radial electrolytics. Please contact the **Anglia Sales Desk** for price and availability.

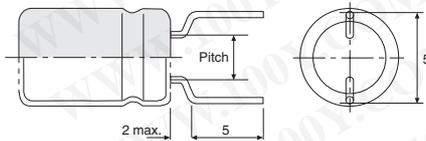
LEAD FORMING & CROPPING

CROPPED
(to 5mm length)
Nover part no.
suffix **C**



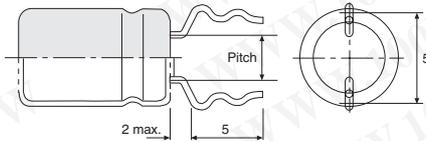
Available on can diameters of 5mm and above

CROPPED & FORMED
(to 5mm length and pitch)
Nover part no.
suffix **F**



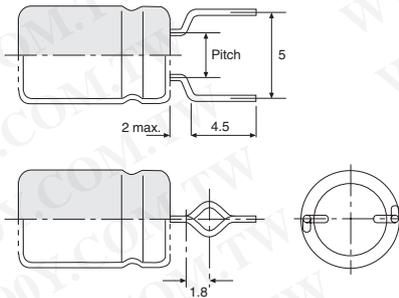
Available on can diameters from 4mm to 8mm

SNAP-IN
(5mm length and pitch)
Nover part no.
suffix **M**



Available on can diameters from 4mm to 8mm

TWISTED & FORMED
(to 4.5mm length and 5mm pitch)
Nover part no.
suffix **W**



Available on can diameters from 4mm to 8mm

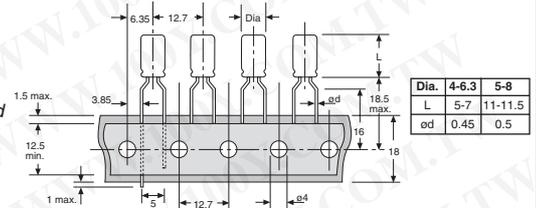
N.B. When leads are formed body height will be raised 2mm over and above the can length (+ sleeve) listed on the product pages.

TAPING

Available on can diameters from 4mm to 16mm :

Can diameters 4mm to 8mm

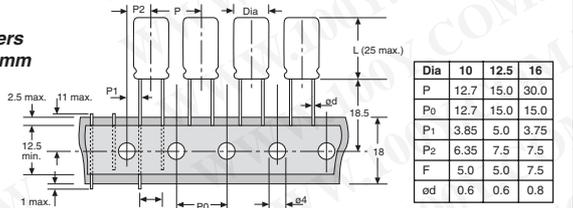
Leads pre-formed to 5mm pitch as standard. Natural pitch available to special order on all can diameters except 4mm.



Dia.	4-6.3	5-8
L	5-7	11-11.5
ød	0.45	0.5

Can diameters 10mm to 16mm

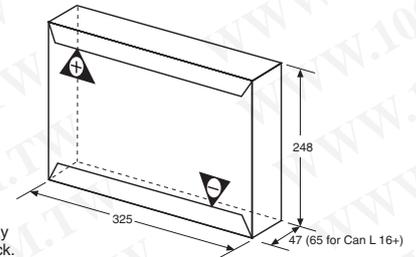
Leads on natural pitch



Dia	10	12.5	16
P	12.7	15.0	30.0
P0	12.7	15.0	15.0
P1	3.85	5.0	3.75
P2	6.35	7.5	7.5
F	5.0	5.0	7.5
ød	0.6	0.6	0.8

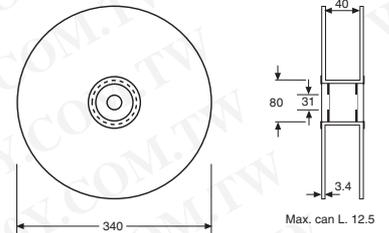
Supplied boxed or reeled :

BOXED (in ammos)
Nover part no. suffix **T**



The polarity of the leading wire may be selected as indicated on the pack.

REELED
Nover part no. suffix **R**

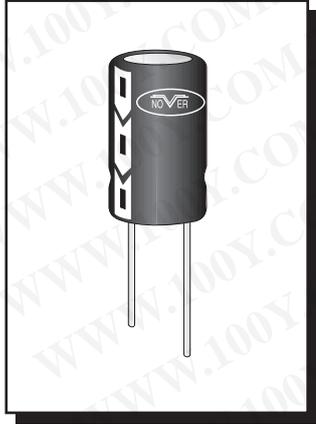


The polarity of the leading wire is negative unless requested otherwise.

Refer to previous page for Nover part number key

NOVER type RE

General purpose, radial lead aluminium electrolytic capacitors manufactured to be highly cost effective whilst offering excellent levels of quality, endurance and reliability. The entire range of available values and voltages in loose or taped formats, are shown on the following pages. For lead forming, cropping and taping options refer to page 5.



- **Standard range**
- High quality
- Endurance **2000 hours at 85°C**
- Solvent resistant
- Very competitively priced
- Capacitance tolerance **20%**
- Body colour **Black**
- Supplied loose or taped

Specification

Conforms to JIS C5141-1982 Char.W
 Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C
 Leakage current 6.3 ~ 100V ≤ 0.01CV or 3µA
 160 ~ 450V ≤ 0.06CV or 10µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000µF above 1000µF

Rated voltage	6.3V	10V	16V	25V	40V	50V	63V	d.c.
Tan δ (max)*	0.22	0.19	0.16	0.14	0.11	0.10	0.09	
Rated voltage	100V	160V	200V	250V	350V	400V	450V	d.c.
Tan δ (max)	0.08	0.12	0.12	0.15	0.15	0.20	0.23	

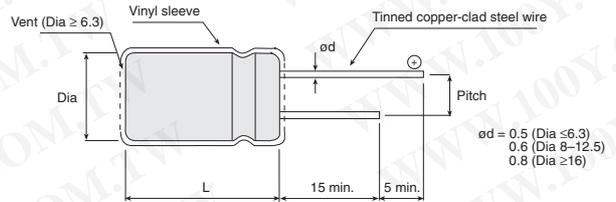
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	40V	50V	63V	d.c.
Surge voltage	8V	13V	20V	32V	50V	63V	79V	d.c.
Rated voltage	100V	160V	200V	250V	350V	400V	450V	d.c.
Surge voltage	125V	200V	250V	300V	400V	450V	500V	d.c.

Multiplier for ripple current

Frequency coefficient						
Rated Voltage (V)	Freq(Hz)	50/60	120	1K	10K	100K
	CV(µF.WV)					
6.3 ~ 16	≤1000	0.8	1.0	1.1	1.2	1.2
	>1000	0.8	1.0	1.2	1.3	1.3
25 ~ 40	≤1000	0.8	1.0	1.6	1.9	1.9
	>1000	0.8	1.0	1.2	1.3	1.3
160 ~ 450		0.8	1.0	1.3	1.5	1.6
Temperature coefficient						
Temperature (°C)		+70		+85		
Factor		1.35		1.0		

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L ≥ 20)

◆ **LEAD FORMING** ◆
 ◆ **CROPPING** ◆
 ◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 100µF 16V	Basic Anglia Code	Nover Letter
Cropped	0 5 3 0 2 0	C
Twisted & formed	0 5 3 0 2 0	W



GENERAL PURPOSE

RADIAL

NOVER type RE

Value (µF)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
6.3 Volt									
33	70	2(5)	5.0 x 11.0	RE0J330MAB	053308	200	RE0J330MAET	053308T	2000
47	75	2(5)	5.0 x 11.0	RE0J470MAB	053309	200	RE0J470MAET	053309T	2000
100	100	2(5)	5.0 x 11.0	RE0J101MAB	053310	200	RE0J101MAET	053310T	2000
220	170	2.5(5)	6.3 x 11.0	RE0J221MBC	053311	200	RE0J221MBET	053311T	1500
330	210	2.5(5)	6.3 x 11.0	RE0J331MBC	053312	200	RE0J331MBET	053312T	1500
470	300	3.5(5)	8.0 x 11.5	RE0J471MCD	053313	200	RE0J471MCET	053313T	1000
1000	530	5	10.0 x 12.5	RE0J102MDE	053314	100	RE0J102MDET	053314T	600
2200	990	5	12.5 x 20.0	RE0J222MGE	053315	100	RE0J222MGET	053315T	400
3300	1150	5	12.5 x 20.0	RE0J332MGE	053316	100	RE0J332MGET	053316T	400
4700	1700	7.5	16.0 x 25.0	RE0J472MPF	053317	100	RE0J472MPFT	053317T	180
6800	1900	7.5	16.0 x 25.0	RE0J682MPF	053318	100	RE0J682MPFT	053318T	180
10000	2250	7.5	16.0 x 31.5	RE0J103MRF	053319	50	-	-	-
15000	2400	7.5	18.0 x 35.5	RE0J153MVF	053320	50	-	-	-
10 Volt									
22	55	2(5)	5.0 x 11.0	RE1A220MAB	053007	200	RE1A220MAET	053007T	2000
33	70	2(5)	5.0 x 11.0	RE1A330MAB	053008	200	RE1A330MAET	053008T	2000
47	75	2(5)	5.0 x 11.0	RE1A470MAB	053009	200	RE1A470MAET	053009T	2000
100	110	2(5)	5.0 x 11.0	RE1A101MAB	053010	200	RE1A101MAET	053010T	2000
220	190	2.5(5)	6.3 x 11.0	RE1A221MBC	053011	200	RE1A221MBET	053011T	1500
330	270	3.5(5)	8.0 x 11.5	RE1A331MCD	053012	200	RE1A331MCET	053012T	1000
470	330	3.5(5)	8.0 x 11.5	RE1A471MCD	053013	200	RE1A471MCET	053013T	1000
1000	620	5	10.0 x 16.0	RE1A102MEE	053014	100	RE1A102MEET	053014T	600
2200	1050	5	12.5 x 20.0	RE1A222MGE	053015	100	RE1A222MGET	053015T	400
3300	1350	5	12.5 x 25.0	RE1A332MHE	053215	100	RE1A332MHET	053215T	400
4700	1800	7.5	16.0 x 25.0	RE1A472MPF	053216	100	RE1A472MPFT	053216T	180
6800	2200	7.5	16.0 x 31.5	RE1A682MRF	053217	50	-	-	-
10000	2750	7.5	18.0 x 35.5	RE1A103MVF	053218	50	-	-	-
16 Volt									
10	40	2(5)	5.0 x 11.0	RE1C100MAB	053016	200	RE1C100MAET	053016T	2000
22	55	2(5)	5.0 x 11.0	RE1C220MAB	053017	200	RE1C220MAET	053017T	2000
33	70	2(5)	5.0 x 11.0	RE1C330MAB	053018	200	RE1C330MAET	053018T	2000
47	80	2(5)	5.0 x 11.0	RE1C470MAB	053019	200	RE1C470MAET	053019T	2000
100	140	2.5(5)	6.3 x 11.0	RE1C101MBC	053020	200	RE1C101MBET	053020T	1500
220	220	2.5(5)	6.3 x 11.0	RE1C221MBC	053421	200	RE1C221MBET	053421T	1500
220	240	3.5(5)	8.0 x 11.5	RE1C221MCD	053021	200	RE1C221MCET	053021T	1000
330	300	3.5(5)	8.0 x 11.5	RE1C331MCD	053022	200	RE1C331MCET	053022T	1000
470	400	3.5(5)	8.0 x 11.5	RE1C471MCD	053423	200	RE1C471MCET	053423T	1000
470	420	5	10.0 x 12.5	RE1C471MDE	053023	100	RE1C471MDET	053023T	600
1000	720	5	10.0 x 16.0	RE1C102MEE	053424	100	RE1C102MEET	053424T	600
1000	740	5	10.0 x 20.0	RE1C102MFE	053024	100	RE1C102MFET	053024T	600
2200	1200	5	12.5 x 25.0	RE1C222MHE	053025	100	RE1C222MHET	053025T	400
3300	1650	7.5	16.0 x 25.0	RE1C332MPF	053225	100	RE1C332MPFT	053225T	180
4700	2100	7.5	16.0 x 31.5	RE1C472MRF	053226	50	-	-	-
6800	2600	7.5	18.0 x 35.5	RE1C682MVF	053227	50	-	-	-
25 Volt									
4.7	25	2(5)	5.0 x 11.0	RE1E4R7MAB	053234	200	RE1E4R7MAET	053234T	2000
10	45	2(5)	5.0 x 11.0	RE1E100MAB	053026	200	RE1E100MAET	053026T	2000
22	60	2(5)	5.0 x 11.0	RE1E220MAB	053027	200	RE1E220MAET	053027T	2000
33	70	2(5)	5.0 x 11.0	RE1E330MAB	053028	200	RE1E330MAET	053028T	2000
47	90	2(5)	5.0 x 11.0	RE1E470MAB	053029	200	RE1E470MAET	053029T	2000
100	150	2.5(5)	6.3 x 11.0	RE1E101MBC	053030	200	RE1E101MBET	053030T	1500
220	260	3.5(5)	8.0 x 11.5	RE1E221MCD	053031	200	RE1E221MCET	053031T	1000
330	380	5	10.0 x 12.5	RE1E331MDE	053032	100	RE1E331MDET	053032T	600
470	500	5	10.0 x 16.0	RE1E471MEE	053033	100	RE1E471MEET	053033T	600
1000	910	5	12.5 x 20.0	RE1E102MGE	053034	100	RE1E102MGET	053034T	400
2200	1400	5	12.5 x 25.0	RE1E222MHE	053435	100	RE1E222MHET	053435T	400
2200	1500	7.5	16.0 x 25.0	RE1E222MPF	053035	100	RE1E222MPFT	053035T	180
3300	1900	7.5	16.0 x 31.5	RE1E332MRF	053235	50	-	-	-
4700	2450	7.5	18.0 x 35.5	RE1E472MVF	053036	50	-	-	-
40 Volt									
4.7	30	2(5)	5.0 x 11.0	RE1G4R7MAB	053236	200	RE1G4R7MAET	053236T	2000
10	45	2(5)	5.0 x 11.0	RE1G100MAB	053037	200	RE1G100MAET	053037T	2000
22	60	2(5)	5.0 x 11.0	RE1G220MAB	053038	200	RE1G220MAET	053038T	2000
33	90	2(5)	5.0 x 11.0	RE1G330MAB	053039	200	RE1G330MAET	053039T	2000
47	100	2.5(5)	6.3 x 11.0	RE1G470MBC	053040	200	RE1G470MBET	053040T	1500
100	200	3.5(5)	8.0 x 11.5	RE1G101MCD	053041	200	RE1G101MCET	053041T	1000
220	360	5	10.0 x 12.5	RE1G221MDE	053042	100	RE1G221MDET	053042T	600
330	500	5	10.0 x 16.0	RE1G331MEE	053043	100	RE1G331MEET	053043T	600
470	620	5	10.0 x 20.0	RE1G471MFE	053044	100	RE1G471MFET	053044T	600
1000	1040	5	12.5 x 25.0	RE1G102MHE	053045	100	RE1G102MHET	053045T	400
2200	1900	7.5	16.0 x 31.5	RE1G222MRF	053046	50	-	-	-
3300	2250	7.5	18.0 x 35.5	RE1G332MVF	053047	50	-	-	-
4700	2500	7.5	18.0 x 35.5	RE1G472MVF	053247	50	-	-	-

(5) Leads pre-formed to 5mm pitch on taped part

RE continued overleaf > > >



NOVER type RE (continued)

Value (μ F)	Ripple Current (mA)	Dimensions (mm)		LOOSE			TAPED & BOXED		
		Pitch	Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
50 Volt									
0.1	5	2(5)	5.0 x 11.0	RE1HR10MAB	053112	200	RE1HR10MAET	053112T	2000
0.22	7	2(5)	5.0 x 11.0	RE1HR22MAB	053113	200	RE1HR22MAET	053113T	2000
0.33	9	2(5)	5.0 x 11.0	RE1HR33MAB	053114	200	RE1HR33MAET	053114T	2000
0.47	10	2(5)	5.0 x 11.0	RE1HR47MAB	053115	200	RE1HR47MAET	053115T	2000
1.0	15	2(5)	5.0 x 11.0	RE1H010MAB	053048	200	RE1H010MAET	053048T	2000
2.2	20	2(5)	5.0 x 11.0	RE1H2R2MAB	053049	200	RE1H2R2MAET	053049T	2000
3.3	25	2(5)	5.0 x 11.0	RE1H3R3MAB	053116	200	RE1H3R3MAET	053116T	2000
4.7	30	2(5)	5.0 x 11.0	RE1H4R7MAB	053050	200	RE1H4R7MAET	053050T	2000
10	45	2(5)	5.0 x 11.0	RE1H100MAB	053051	200	RE1H100MAET	053051T	2000
22	70	2(5)	5.0 x 11.0	RE1H220MAB	053052	200	RE1H220MAET	053052T	2000
33	100	2.5(5)	6.3 x 11.0	RE1H330MBC	053053	200	RE1H330MBET	053053T	1500
47	120	2.5(5)	6.3 x 11.0	RE1H470MBC	053054	200	RE1H470MBET	053054T	1500
100	210	3.5(5)	8.0 x 11.5	RE1H101MCD	053055	200	RE1H101MCET	053055T	1000
220	400	5	10.0 x 16.0	RE1H221MEE	053056	100	RE1H221MEET	053056T	600
330	540	5	10.0 x 20.0	RE1H331MFE	053057	100	RE1H331MFET	053057T	600
470	740	5	12.5 x 20.0	RE1H471MGE	053058	100	RE1H471MGET	053058T	400
1000	1280	5	12.5 x 25.0	RE1H102MHE	053459	100	RE1H102MHET	053459T	400
1000	1350	7.5	16.0 x 25.0	RE1H102MPF	053059	100	RE1H102MPFT	053059T	180
2200	2100	7.5	18.0 x 35.5	RE1H222MVF	053221	50	-	-	-
63 Volt									
0.1	5	2(5)	5.0 x 11.0	RE1JR10MAB	053117	200	RE1JR10MAET	053117T	2000
0.22	8	2(5)	5.0 x 11.0	RE1JR22MAB	053118	200	RE1JR22MAET	053118T	2000
0.33	9	2(5)	5.0 x 11.0	RE1JR33MAB	053119	200	RE1JR33MAET	053119T	2000
0.47	10	2(5)	5.0 x 11.0	RE1JR47MAB	053060	200	RE1JR47MAET	053060T	2000
1.0	15	2(5)	5.0 x 11.0	RE1J010MAB	053061	200	RE1J010MAET	053061T	2000
2.2	20	2(5)	5.0 x 11.0	RE1J2R2MAB	053062	200	RE1J2R2MAET	053062T	2000
3.3	30	2(5)	5.0 x 11.0	RE1J3R3MAB	053063	200	RE1J3R3MAET	053063T	2000
4.7	35	2(5)	5.0 x 11.0	RE1J4R7MAB	053064	200	RE1J4R7MAET	053064T	2000
10	50	2(5)	5.0 x 11.0	RE1J100MAB	053065	200	RE1J100MAET	053065T	2000
22	85	2.5(5)	6.3 x 11.0	RE1J220MBC	053066	200	RE1J220MBET	053066T	1500
33	100	2.5(5)	6.3 x 11.0	RE1J330MBC	053067	200	RE1J330MBET	053067T	1500
47	150	3.5(5)	8.0 x 11.5	RE1J470MCD	053068	200	RE1J470MCET	053068T	1000
100	260	5	10.0 x 12.5	RE1J101MDE	053069	100	RE1J101MDET	053069T	600
220	460	5	10.0 x 20.0	RE1J221MFE	053070	100	RE1J221MFET	053070T	600
330	650	5	12.5 x 20.0	RE1J331MGE	053071	100	RE1J331MGET	053071T	400
470	850	5	12.5 x 25.0	RE1J471MHE	053120	100	RE1J471MHET	053120T	400
1000	1550	7.5	16.0 x 31.5	RE1J102MRF	053220	50	-	-	-
100 Volt									
0.1	5	2(5)	5.0 x 11.0	RE2AR10MAB	053128	200	RE2AR10MAET	053128T	2000
0.22	8	2(5)	5.0 x 11.0	RE2AR22MAB	053129	200	RE2AR22MAET	053129T	2000
0.33	10	2(5)	5.0 x 11.0	RE2AR33MAB	053130	200	RE2AR33MAET	053130T	2000
0.47	10	2(5)	5.0 x 11.0	RE2AR47MAB	053072	200	RE2AR47MAET	053072T	2000
1.0	15	2(5)	5.0 x 11.0	RE2A010MAB	053073	200	RE2A010MAET	053073T	2000
2.2	25	2(5)	5.0 x 11.0	RE2A2R2MAB	053074	200	RE2A2R2MAET	053074T	2000
3.3	30	2(5)	5.0 x 11.0	RE2A3R3MAB	053075	200	RE2A3R3MAET	053075T	2000
4.7	35	2(5)	5.0 x 11.0	RE2A4R7MAB	053076	200	RE2A4R7MAET	053076T	2000
10	60	2.5(5)	6.3 x 11.0	RE2A100MBC	053077	200	RE2A100MBET	053077T	1500
22	110	3.5(5)	8.0 x 11.5	RE2A220MCD	053078	200	RE2A220MCET	053078T	1000
33	160	5	10.0 x 12.5	RE2A330MDE	053079	100	RE2A330MDET	053079T	600
47	210	5	10.0 x 16.0	RE2A470MEE	053080	100	RE2A470MEET	053080T	600
100	380	5	12.5 x 20.0	RE2A101MGE	053081	100	RE2A101MGET	053081T	400
220	720	7.5	16.0 x 25.0	RE2A221MPF	053083	100	RE2A221MPFT	053083T	180
330	880	7.5	16.0 x 25.0	RE2A331MPF	053084	100	RE2A331MPFT	053084T	180
470	1150	7.5	16.0 x 31.5	RE2A471MRF	053085	50	-	-	-
160 Volt									
0.47	10	2.5(5)	6.3 x 11.0	RE2CR47MBC	053086	200	RE2CR47MBET	053086T	1500
1.0	15	2.5(5)	6.3 x 11.0	RE2C010MBC	053087	200	RE2C010MBET	053087T	1500
2.2	20	2.5(5)	6.3 x 11.0	RE2C2R2MBC	053088	200	RE2C2R2MBET	053088T	1500
3.3	35	3.5(5)	8.0 x 11.5	RE2C3R3MCD	053089	200	RE2C3R3MCET	053089T	1000
4.7	40	3.5(5)	8.0 x 11.5	RE2C4R7MCD	053090	200	RE2C4R7MCET	053090T	1000
10	70	5	10.0 x 12.5	RE2C100MDE	053091	100	RE2C100MDET	053091T	600
22	120	5	10.0 x 20.0	RE2C220MFE	053092	100	RE2C220MFET	053092T	600
33	180	5	12.5 x 20.0	RE2C330MGE	053093	100	RE2C330MGET	053093T	600
47	230	5	12.5 x 25.0	RE2C470MHE	053094	100	RE2C470MHET	053094T	400
100	400	7.5	16.0 x 25.0	RE2C101MPF	053095	100	RE2C101MPFT	053095T	180
220	730	7.5	18.0 x 35.5	RE2C221MVF	053096	50	-	-	-
200 Volt									
0.47	10	2.5(5)	6.3 x 11.0	RE2DR47MBC	053097	200	RE2DR47MBET	053097T	1500
1.0	15	2.5(5)	6.3 x 11.0	RE2D010MBC	053098	200	RE2D010MBET	053098T	1500
2.2	20	2.5(5)	6.3 x 11.0	RE2D2R2MBC	053099	200	RE2D2R2MBET	053099T	1500
3.3	35	3.5(5)	8.0 x 11.5	RE2D3R3MCD	053100	200	RE2D3R3MCET	053100T	1000
4.7	50	5	10.0 x 12.5	RE2D4R7MDE	053101	100	RE2D4R7MDET	053101T	600
10	75	5	10.0 x 16.0	RE2D100MEE	053102	100	RE2D100MEET	053102T	600
22	120	5	10.0 x 20.0	RE2D220MFE	053103	100	RE2D220MFET	053103T	600
33	190	5	12.5 x 25.0	RE2D330MHE	053104	100	RE2D330MHET	053104T	400
47	220	5	12.5 x 25.0	RE2D470MHE	053105	100	RE2D470MHET	053105T	400
100	430	7.5	16.0 x 31.5	RE2D101MRF	053138	50	-	-	-
220	760	7.5	18.0 x 35.5	RE2D221MVF	053139	50	-	-	-



NOVER type RE (continued)

Value (μ F)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED			Box Qty pcs
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code		
250 Volt										
0.47	10	2.5(5)	6.3 x 11.0	RE2ER47MBC	053106	200	RE2ER47MBET	053106T	1500	
1.0	15	2.5(5)	6.3 x 11.0	RE2E010MBC	053107	200	RE2E010MBET	053107T	1500	
2.2	25	3.5(5)	8.0 x 11.5	RE2E2R2MCD	053108	200	RE2E2R2MCET	053108T	1000	
3.3	35	5	10.0 x 12.5	RE2E3R3MDE	053109	100	RE2E3R3MDET	053109T	600	
4.7	40	5	10.0 x 12.5	RE2E4R7MDE	053110	100	RE2E4R7MDET	053110T	600	
10	75	5	10.0 x 20.0	RE2E100MFE	053111	100	RE2E100MFET	053111T	600	
22	140	5	12.5 x 25.0	RE2E220MHE	053135	100	RE2E220MHET	053135T	400	
33	170	5	12.5 x 20.0	RE2E330MGE	053136	100	RE2E330MGET	053136T	400	
47	240	7.5	16.0 x 25.0	RE2E470MPF	053182	100	RE2E470MPFT	053182T	180	
100	440	7.5	18.0 x 35.5	RE2E101MVF	053183	50	-	-	-	
350 Volt										
0.47	10	2.5(5)	6.3 x 11.0	RE2VR47MBC	053131	200	RE2VR47MBET	053131T	1500	
1.0	15	3.5(5)	8.0 x 11.5	RE2V010MCD	053132	200	RE2V010MCET	053132T	1000	
2.2	30	5	10.0 x 12.5	RE2V2R2MDE	053133	100	RE2V2R2MDET	053133T	600	
3.3	35	5	10.0 x 12.5	RE2V3R3MDE	053134	100	RE2V3R3MDET	053134T	600	
4.7	45	5	10.0 x 16.0	RE2V4R7MEE	053140	100	RE2V4R7MEET	053140T	600	
10	75	5	10.0 x 20.0	RE2V100MFE	053141	100	RE2V100MFET	053141T	600	
22	140	5	12.5 x 25.0	RE2V220MHE	053142	100	RE2V220MHET	053142T	400	
33	200	7.5	16.0 x 25.0	RE2V330MPF	053143	100	RE2V330MPFT	053143T	180	
47	260	7.5	16.0 x 31.5	RE2V470MRF	053144	50	-	-	-	
400 Volt										
1.0	15	3.5(5)	8.0 x 11.5	RE2G010MCD	053146	200	RE2G010MCET	053146T	1000	
2.2	20	5	10.0 x 12.5	RE2G2R2MDE	053147	100	RE2G2R2MDET	053147T	600	
3.3	35	5	10.0 x 16.0	RE2G3R3MEE	053148	100	RE2G3R3MEET	053148T	600	
4.7	45	5	10.0 x 20.0	RE2G4R7MFE	053149	100	RE2G4R7MFET	053149T	600	
10	75	5	12.5 x 20.0	RE2G100MGE	053150	100	RE2G100MGET	053150T	400	
22	140	7.5	16.0 x 25.0	RE2G220MPF	053151	100	RE2G220MPFT	053151T	180	
33	190	7.5	16.0 x 31.5	RE2G330MRF	053152	50	-	-	-	
47	260	7.5	18.0 x 35.5	RE2G470MVF	053153	50	-	-	-	
450 Volt										
1.0	15	5	10.0 x 12.5	RE2W010MDE	053121	100	RE2W010MDET	053121T	600	
2.2	25	5	10.0 x 16.0	RE2W2R2MEE	053122	100	RE2W2R2MEET	053122T	600	
3.3	35	5	10.0 x 20.0	RE2W3R3MFE	053123	100	RE2W3R3MFET	053123T	600	
4.7	45	5	12.5 x 20.0	RE2W4R7MGE	053124	100	RE2W4R7MGET	053124T	400	
10	75	5	12.5 x 25.0	RE2W100MHE	053125	100	RE2W100MHET	053125T	400	
22	140	7.5	16.0 x 31.5	RE2W220MRF	053126	50	-	-	-	
33	200	7.5	18.0 x 35.5	RE2W330MVF	053127	50	-	-	-	

(5) Leads pre-formed to 5mm pitch on taped part



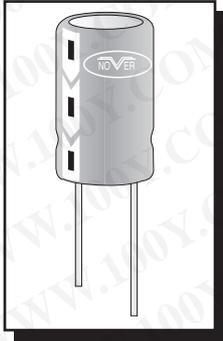
ORDERING INFORMATION

For simplicity, this list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 100 μ F 16V	Basic Anglia Code	Nover Letter
Cropped	0 5 3 0 2 0	C
Twisted & formed	0 5 3 0 2 0	W

NOVER type RH

A range of radial aluminium electrolytic capacitors designed for applications where greater temperature safety margins are required due to high ambient conditions. Endurance testing is carried out at maximum temperature rating to ensure component integrity and reliability. The entire range of available values and voltages in loose or taped formats, are shown on the following pages. For lead forming, cropping and taping options refer to page 5.



- **High temperature**
- Endurance **2000 hours at 105°C**
- Solvent resistant
- Capacitance tolerance **20%**
- Body colour **Light Green**
- Supplied loose or taped

Specification

Conforms to JIS C5141-1982 Char.W

Endurance test	2000 hours at 105°C
Capacitance tolerance	±20% at 120Hz, 20°C
Ripple current (as listed)	6.3 ~ 100V measured at 100kHz, 105°C 160 ~ 400V measured at 120Hz, 105°C (see also Multiplier table below)
Operating temperature range	-40°C to +105°C
Leakage current	6.3 ~ 100V ≤0.01CV or 3µA after 2 min 160 ~ 400V ≤1000 - 0.1CV or 40µA after 1 min. C >1000 - 0.04CV or 100µA after 1 min. (whichever is greater)

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000µF above 1000µF

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	d.c.
Tan δ (max)*	0.22	0.19	0.16	0.14	0.12	0.10	0.08	
Rated voltage	100V	160V	200V	250V	315V	350V	400V	d.c.
Tan δ (max)	0.08	0.15	0.15	0.15	0.15	0.20	0.20	

Surge voltage capability

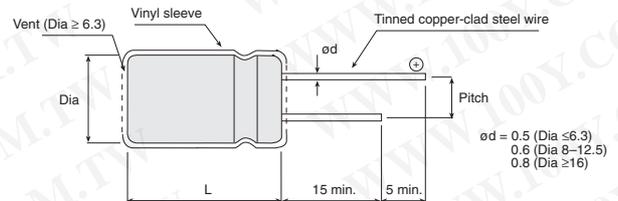
Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	79V	d.c.
Rated voltage	100V	160V	200V	250V	315V	350V	400V	d.c.
Surge voltage	125V	200V	250V	300V	365V	400V	450V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)				
Rated Voltage (V)	Cap (µF)	50	120	1K	10K	100K
	6.3 ~ 100	0.1 ~ 4.7	—	0.4	0.7	0.8
10 ~ 47		—	0.5	0.8	0.9	1.0
100 ~ 220		—	0.7	0.9	0.9	1.0
330 ~ 1000		—	0.8	0.9	1.0	1.0
2200 ~ 15000		—	0.9	1.0	1.0	1.0
160 ~ 400	0.47 ~ 220	0.8	1.0	1.3	1.4	1.6

Temperature coefficient			
Temperature (°C)	+70	+85	+105
Rated Voltage (V)			
6.3 ~ 100	2.0	1.7	1.0
160 ~ 400	1.8	1.4	1.0

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L ≥20)

◆ LEAD FORMING ◆

◆ CROPPING ◆

◆ TAPING ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 100µF 16V		
	Basic Anglia Code	Nover Letter
Cropped	0 5 2 0 2 0	C
Twisted & formed	0 5 2 0 2 0	W



NOVER type RH

Value (µF)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs	
				Nover Part No.	Anglia Order Code		Nover Part No.	Anglia Order Code		
6.3 Volt										
33	105	2(5)	5.0 x 11.0	RH0J330MAB	052308	200	RH0J330MAET	052308T	2000	
47	120	2(5)	5.0 x 11.0	RH0J470MAB	052309	200	RH0J470MAET	052309T	2000	
100	130	2(5)	5.0 x 11.0	RH0J101MAB	052310	200	RH0J101MAET	052310T	2000	
220	180	2.5(5)	6.3 x 11.0	RH0J221MBC	052311	200	RH0J221MBET	052311T	1500	
330	220	2.5(5)	6.3 x 11.0	RH0J331MBC	052712	200	RH0J331MBET	052712T	1500	
330	220	3.5(5)	8.0 x 11.5	RH0J331MCD	052312	200	RH0J331MCET	052312T	1000	
470	315	3.5(5)	8.0 x 11.5	RH0J471MCD	052313	200	RH0J471MCET	052313T	1000	
1000	500	5	10.0 x 12.5	RH0J102MDE	052314	100	RH0J102MDET	052314T	600	
2200	1000	5	12.5 x 20.0	RH0J222MGE	052315	100	RH0J222MGET	052315T	400	
3300	1050	5	12.5 x 20.0	RH0J332MGE	052716	100	RH0J332MGET	052716T	400	
3300	1050	5	12.5 x 25.0	RH0J332MHE	052316	100	RH0J332MHET	052316T	400	
4700	1670	7.5	16.0 x 25.0	RH0J472MPF	052317	100	RH0J472MPFT	052317T	180	
6800	1740	7.5	16.0 x 25.0	RH0J682MPF	052718	100	RH0J682MPFT	052718T	180	
6800	1740	7.5	16.0 x 31.5	RH0J682MRF	052318	50	-	-	-	
10000	2110	7.5	16.0 x 31.5	RH0J103MRF	052719	50	-	-	-	
10000	2110	7.5	18.0 x 35.5	RH0J103MVF	052319	50	-	-	-	
15000	2580	7.5	18.0 x 35.5	RH0J153MVF	052320	50	-	-	-	
10 Volt										
22	92	2(5)	5.0 x 11.0	RH1A220MAB	052007	200	RH1A220MAET	052007T	2000	
33	105	2(5)	5.0 x 11.0	RH1A330MAB	052008	200	RH1A330MAET	052008T	2000	
47	120	2(5)	5.0 x 11.0	RH1A470MAB	052009	200	RH1A470MAET	052009T	2000	
100	130	2(5)	5.0 x 11.0	RH1A101MAB	052010	200	RH1A101MAET	052010T	2000	
220	220	2.5(5)	6.3 x 11.0	RH1A221MBC	052011	200	RH1A221MBET	052011T	1500	
330	265	3.5(5)	8.0 x 11.5	RH1A331MCD	052412	200	RH1A331MCET	052412T	1000	
330	265	5	10.0 x 12.5	RH1A331MDE	052012	100	RH1A331MDET	052012T	600	
470	315	3.5(5)	8.0 x 11.5	RH1A471MCD	052413	200	RH1A471MCET	052413T	1000	
470	315	5	10.0 x 12.5	RH1A471MDE	052013	100	RH1A471MDET	052013T	600	
1000	615	5	10.0 x 16.0	RH1A102MEE	052414	100	RH1A102MEET	052414T	600	
2200	1050	5	12.5 x 20.0	RH1A222MGE	052015	100	RH1A222MGET	052015T	400	
3300	1300	5	12.5 x 25.0	RH1A332MHE	052615	100	RH1A332MHET	052615T	400	
3300	1300	7.5	16.0 x 25.0	RH1A332MPF	052215	100	RH1A332MPFT	052215T	180	
4700	1740	7.5	16.0 x 25.0	RH1A472MPF	052616	100	RH1A472MPET	052616T	180	
4700	1740	7.5	16.0 x 31.5	RH1A472MRF	052216	50	-	-	-	
6800	2110	7.5	16.0 x 31.5	RH1A682MRF	052617	50	-	-	-	
6800	2110	7.5	18.0 x 35.5	RH1A682MVF	052217	50	-	-	-	
10000	2580	7.5	18.0 x 35.5	RH1A103MVF	052218	50	-	-	-	
16 Volt										
10	92	2(5)	5.0 x 11.0	RH1C100MAB	052016	200	RH1C100MAET	052016T	2000	
22	105	2(5)	5.0 x 11.0	RH1C220MAB	052017	200	RH1C220MAET	052017T	2000	
33	120	2(5)	5.0 x 11.0	RH1C330MAB	052018	200	RH1C330MAET	052018T	2000	
47	130	2(5)	5.0 x 11.0	RH1C470MAB	052019	200	RH1C470MAET	052019T	2000	
100	220	2.5(5)	6.3 x 11.0	RH1C101MBC	052020	200	RH1C101MBET	052020T	1500	
220	290	3.5(5)	8.0 x 11.5	RH1C221MCD	052021	200	RH1C221MCET	052021T	1000	
330	315	3.5(5)	8.0 x 11.5	RH1C331MCD	052422	200	RH1C331MCET	052422T	1000	
330	315	5	10.0 x 12.5	RH1C331MDE	052022	100	RH1C331MDET	052022T	600	
470	315	5	10.0 x 12.5	RH1C471MDE	052023	100	RH1C471MDET	052023T	600	
1000	825	5	10.0 x 20.0	RH1C102MFE	052024	100	RH1C102MFET	052024T	600	
2200	1300	5	12.5 x 25.0	RH1C222MHE	052025	100	RH1C222MHET	052025T	400	
3300	1740	7.5	16.0 x 25.0	RH1C332MPF	052225	100	RH1C332MPFT	052225T	180	
4700	2110	7.5	16.0 x 31.5	RH1C472MRF	052226	50	-	-	-	
6800	2580	7.5	18.0 x 35.5	RH1C682MVF	052227	50	-	-	-	
25 Volt										
4.7	85	2(5)	5.0 x 11.0	RH1E4R7MAB	052234	200	RH1E4R7MAET	052234T	2000	
10	92	2(5)	5.0 x 11.0	RH1E100MAB	052026	200	RH1E100MAET	052026T	2000	
22	105	2(5)	5.0 x 11.0	RH1E220MAB	052027	200	RH1E220MAET	052027T	2000	
33	120	2(5)	5.0 x 11.0	RH1E330MAB	052028	200	RH1E330MAET	052028T	2000	
47	130	2(5)	5.0 x 11.0	RH1E470MAB	052429	200	RH1E470MAET	052429T	2000	
47	130	2.5(5)	6.3 x 11.0	RH1E470MBC	052029	200	RH1E470MBET	052029T	1500	
100	220	2.5(5)	6.3 x 11.0	RH1E101MBC	052430	200	RH1E101MBET	052430T	1500	
100	220	3.5(5)	8.0 x 11.5	RH1E101MCD	052030	200	RH1E101MCET	052030T	1000	
220	315	3.5(5)	8.0 x 11.5	RH1E221MCD	052431	200	RH1E221MCET	052431T	1000	
220	315	5	10.0 x 12.5	RH1E221MDE	052031	100	RH1E221MDET	052031T	600	
330	500	5	10.0 x 12.5	RH1E331MDE	052032	100	RH1E331MDET	052032T	600	
470	615	5	10.0 x 16.0	RH1E471MEE	052033	100	RH1E471MEET	052033T	600	
1000	1050	5	12.5 x 20.0	RH1E102MGE	052034	100	RH1E102MGET	052034T	400	
2200	1740	7.5	16.0 x 25.0	RH1E222MPF	052035	100	RH1E222MPFT	052035T	180	
3300	2110	7.5	16.0 x 31.5	RH1E332MRF	052235	50	-	-	-	
4700	2580	7.5	18.0 x 35.5	RH1E472MVF	052036	50	-	-	-	

(5) Leads pre-formed to 5mm pitch on taped part

RH continued overleaf > > >



NOVER type RH (continued)

Value (µF)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
35 Volt									
4.7	92	2(5)	5.0 x 11.0	RH1V4R7MAB	052236	200	RH1V4R7MAET	052236T	2000
10	105	2(5)	5.0 x 11.0	RH1V100MAB	052037	200	RH1V100MAET	052037T	2000
22	120	2(5)	5.0 x 11.0	RH1V220MAB	052038	200	RH1V220MAET	052038T	2000
33	130	2(5)	5.0 x 11.0	RH1V330MAB	052439	200	RH1V330MAET	052439T	2000
33	130	2.5(5)	6.3 x 11.0	RH1V330MBC	052039	200	RH1V330MBET	052039T	1500
47	220	2.5(5)	6.3 x 11.0	RH1V470MBC	052040	200	RH1V470MBET	052040T	1500
100	315	3.5(5)	8.0 x 11.5	RH1V101MCD	052041	200	RH1V101MCET	052041T	1000
220	500	5	10.0 x 12.5	RH1V221MDE	052042	100	RH1V221MDET	052042T	600
330	615	5	10.0 x 16.0	RH1V331MEE	052043	100	RH1V331MEET	052043T	600
470	825	5	10.0 x 20.0	RH1V471MFE	052044	100	RH1V471MFET	052044T	600
1000	1300	5	12.5 x 25.0	RH1V102MHE	052445	100	RH1V102MHET	052445T	400
1000	1300	7.5	16.0 x 25.0	RH1V102MPF	052045	100	RH1V102MPFT	052045T	180
2200	2110	7.5	16.0 x 31.5	RH1V222MRF	052046	50	-	-	-
3300	2580	7.5	18.0 x 35.5	RH1V332MVF	052047	50	-	-	-
50 Volt									
0.1	10	2(5)	5.0 x 11.0	RH1HR10MAB	052112	200	RH1HR10MAET	052112T	2000
0.22	15	2(5)	5.0 x 11.0	RH1HR22MAB	052113	200	RH1HR22MAET	052113T	2000
0.33	18	2(5)	5.0 x 11.0	RH1HR33MAB	052114	200	RH1HR33MAET	052114T	2000
0.47	23	2(5)	5.0 x 11.0	RH1HR47MAB	052115	200	RH1HR47MAET	052115T	2000
1.0	35	2(5)	5.0 x 11.0	RH1H010MAB	052048	200	RH1H010MAET	052048T	2000
2.2	53	2(5)	5.0 x 11.0	RH1H2R2MAB	052049	200	RH1H2R2MAET	052049T	2000
3.3	65	2(5)	5.0 x 11.0	RH1H3R3MAB	052116	200	RH1H3R3MAET	052116T	2000
4.7	82	2(5)	5.0 x 11.0	RH1H4R7MAB	052050	200	RH1H4R7MAET	052050T	2000
10	100	2(5)	5.0 x 11.0	RH1H100MAB	052051	200	RH1H100MAET	052051T	2000
22	125	2(5)	5.0 x 11.0	RH1H220MAB	052452	200	RH1H220MAET	052452T	2000
22	125	2.5(5)	6.3 x 11.0	RH1H220MBC	052052	200	RH1H220MBET	052052T	1500
33	195	2.5(5)	6.3 x 11.0	RH1H330MBC	052053	200	RH1H330MBET	052053T	1500
47	245	2.5(5)	6.3 x 11.0	RH1H470MBC	052054	200	RH1H470MBET	052054T	1500
100	385	3.5(5)	8.0 x 11.5	RH1H101MCD	052055	200	RH1H101MCET	052055T	1000
220	505	5	10.0 x 16.0	RH1H221MEE	052056	100	RH1H221MEET	052056T	600
330	675	5	10.0 x 20.0	RH1H331MFE	052457	100	RH1H331MFET	052457T	600
330	675	5	12.5 x 20.0	RH1H331MGE	052057	100	RH1H331MGET	052057T	400
470	895	5	12.5 x 20.0	RH1H471MGE	052058	100	RH1H471MGET	052058T	400
1000	1495	7.5	16.0 x 25.0	RH1H102MPF	052059	100	RH1H102MPFT	052059T	180
2200	2190	7.5	18.0 x 35.5	RH1H222MVF	052221	50	-	-	-
63 Volt									
0.1	10	2(5)	5.0 x 11.0	RH1JR10MAB	052117	200	RH1JR10MAET	052117T	2000
0.22	15	2(5)	5.0 x 11.0	RH1JR22MAB	052118	200	RH1JR22MAET	052118T	2000
0.33	18	2(5)	5.0 x 11.0	RH1JR33MAB	052119	200	RH1JR33MAET	052119T	2000
0.47	23	2(5)	5.0 x 11.0	RH1JR47MAB	052060	200	RH1JR47MAET	052060T	2000
1.0	35	2(5)	5.0 x 11.0	RH1J010MAB	052061	200	RH1J010MAET	052061T	2000
2.2	53	2(5)	5.0 x 11.0	RH1J2R2MAB	052062	200	RH1J2R2MAET	052062T	2000
3.3	65	2(5)	5.0 x 11.0	RH1J3R3MAB	052063	200	RH1J3R3MAET	052063T	2000
4.7	74	2(5)	5.0 x 11.0	RH1J4R7MAB	052064	200	RH1J4R7MAET	052064T	2000
10	95	2(5)	5.0 x 11.0	RH1J100MAB	052465	200	RH1J100MAET	052465T	2000
10	95	2.5(5)	6.3 x 11.0	RH1J100MBC	052065	200	RH1J100MBET	052065T	1500
22	130	3.5(5)	8.0 x 11.5	RH1J220MCD	052066	200	RH1J220MCET	052066T	1000
33	160	2.5(5)	6.3 x 11.0	RH1J330MBC	052467	200	RH1J330MBET	052467T	1500
33	160	3.5(5)	8.0 x 11.5	RH1J330MCD	052067	200	RH1J330MCET	052067T	1000
47	305	3.5(5)	8.0 x 11.5	RH1J470MCD	052068	200	RH1J470MCET	052068T	1000
100	395	5	10.0 x 12.5	RH1J101MDE	052069	100	RH1J101MDET	052069T	600
220	505	5	10.0 x 20.0	RH1J221MFE	052070	100	RH1J221MFET	052070T	600
330	660	5	12.5 x 20.0	RH1J331MGE	052471	100	RH1J331MGET	052471T	400
330	660	5	12.5 x 25.0	RH1J331MHE	052071	100	RH1J331MHET	052071T	400
470	850	5	12.5 x 25.0	RH1J471MHE	052520	100	RH1J471MHET	052520T	400
470	1250	7.5	16.0 x 25.0	RH1J471MPF	052120	100	RH1J471MPFT	052120T	180
1000	1430	7.5	16.0 x 31.5	RH1J102MRF	052220	50	-	-	-
100 Volt									
0.47	30	2(5)	5.0 x 11.0	RH2AR47MAB	052072	200	RH2AR47MAET	052072T	2000
1.0	45	2(5)	5.0 x 11.0	RH2A010MAB	052073	200	RH2A010MAET	052073T	2000
2.2	60	2(5)	5.0 x 11.0	RH2A2R2MAB	052074	200	RH2A2R2MAET	052074T	2000
3.3	67	2(5)	5.0 x 11.0	RH2A3R3MAB	052075	200	RH2A3R3MAET	052075T	2000
4.7	75	2(5)	5.0 x 11.0	RH2A4R7MAB	052076	200	RH2A4R7MAET	052076T	2000
10	110	2.5(5)	6.3 x 11.0	RH2A100MBC	052077	200	RH2A100MBET	052077T	1500
22	165	3.5(5)	8.0 x 11.5	RH2A220MCD	052078	200	RH2A220MCET	052078T	1000
33	305	5	10.0 x 12.5	RH2A330MDE	052079	100	RH2A330MDET	052079T	600
47	320	5	10.0 x 16.0	RH2A470MEE	052080	100	RH2A470MEET	052080T	600
100	585	5	12.5 x 20.0	RH2A101MGE	052081	100	RH2A101MGET	052081T	400
220	1120	7.5	16.0 x 25.0	RH2A221MPF	052082	100	RH2A221MPFT	052082T	180
330	1290	7.5	16.0 x 25.0	RH2A331MPF	052083	100	RH2A331MPFT	052083T	180
470	1350	7.5	16.0 x 31.5	RH2A471MRF	052084	50	-	-	-



NOVER type RH (continued)

Value (µF)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Novor Part No.	Anglia Order Code	Pack Qty pcs	Novor Part No.	Anglia Order Code	Box Qty pcs
160V									
0.47	12	2.5(5)	6.3 x 11.0	RH2CR47MBC	052086	200	RH2CR47MBET	052086T	1500
1.0	18	2.5(5)	6.3 x 11.0	RH2C010MBC	052087	200	RH2C010MBET	052087T	1500
2.2	26	2.5(5)	6.3 x 11.0	RH2C2R2MBC	052088	200	RH2C2R2MBET	052088T	1500
3.3	37	3.5(5)	8.0 x 11.5	RH2C3R3MCD	052089	200	RH2C3R3MCET	052089T	1000
4.7	44	3.5(5)	8.0 x 11.5	RH2C4R7MCD	052090	200	RH2C4R7MCET	052090T	1000
10	75	5	10.0 x 12.5	RH2C100MDE	052091	100	RH2C100MDET	052091T	600
22	135	5	10.0 x 20.0	RH2C220MFE	052092	100	RH2C220MFET	052092T	600
33	175	5	12.5 x 20.0	RH2C330MGE	052093	100	RH2C330MGET	052093T	400
47	230	5	12.5 x 25.0	RH2C470MHE	052094	100	RH2C470MHET	052094T	400
100	330	7.5	16.0 x 25.0	RH2C101MPF	052095	100	RH2C101MPFT	052095T	180
220	500	7.5	18.0 x 35.5	RH2C221MVF	052096	50	-	-	-
200V									
0.47	12	2.5(5)	6.3 x 11.0	RH2DR47MBC	052097	200	RH2DR47MBET	052097T	1500
1.0	18	2.5(5)	6.3 x 11.0	RH2D010MBC	052098	200	RH2D010MBET	052098T	1500
2.2	26	2.5(5)	6.3 x 11.0	RH2D2R2MBC	052099	200	RH2D2R2MBET	052099T	1500
3.3	37	3.5(5)	8.0 x 11.5	RH2D3R3MCD	052100	200	RH2D3R3MCET	052100T	1000
4.7	50	5	10.0 x 12.5	RH2D4R7MDE	052101	100	RH2D4R7MDET	052101T	600
10	80	5	10.0 x 16.0	RH2D100MEE	052102	100	RH2D100MEET	052102T	600
22	135	5	10.0 x 20.0	RH2D220MFE	052103	100	RH2D220MFET	052103T	600
33	190	5	12.5 x 25.0	RH2D330MHE	052104	100	RH2D330MHET	052104T	400
47	230	5	12.5 x 25.0	RH2D470MHE	052105	100	RH2D470MHET	052105T	400
100	360	7.5	16.0 x 31.5	RH2D101MRF	052138	50	-	-	-
220	525	7.5	18.0 x 35.5	RH2D221MVF	052139	50	-	-	-
250V									
0.47	12	2.5(5)	6.3 x 11.0	RH2ER47MBC	052106	200	RH2ER47MBET	052106T	1500
1.0	18	2.5(5)	6.3 x 11.0	RH2E010MBC	052107	200	RH2E010MBET	052107T	1500
2.2	30	3.5(5)	8.0 x 11.5	RH2E2R2MCD	052108	200	RH2E2R2MCET	052108T	1000
3.3	43	5	10.0 x 12.5	RH2E3R3MDE	052109	100	RH2E3R3MDET	052109T	600
4.7	50	5	10.0 x 12.5	RH2E4R7MDE	052110	100	RH2E4R7MDET	052110T	600
10	90	5	10.0 x 20.0	RH2E100MFE	052111	100	RH2E100MFET	052111T	600
22	155	5	12.5 x 25.0	RH2E220MHE	052135	100	RH2E220MHET	052135T	400
33	190	5	12.5 x 25.0	RH2E330MHE	052136	100	RH2E330MHET	052136T	400
47	225	7.5	16.0 x 25.0	RH2E470MPF	052182	100	RH2E470MPFT	052182T	180
100	340	7.5	18.0 x 35.5	RH2E101MVF	052183	50	-	-	-
315V									
0.47	11	2.5(5)	6.3 x 11.0	RH2FR47MBC	052240	200	RH2FR47MBET	052240T	1500
1.0	16	2.5(5)	6.3 x 11.0	RH2FR10MBC	052241	200	RH2FR10MBET	052241T	1500
2.2	27	3.5(5)	8.0 x 11.5	RH2F2R2MCD	052242	200	RH2F2R2MCET	052242T	1000
3.3	36	5	10.0 x 12.5	RH2F3R3MDE	052243	100	RH2F3R3MDET	052243T	600
4.7	47	5	10.0 x 16.0	RH2F4R7MEE	052244	100	RH2F4R7MEET	052244T	600
10	75	5	10.0 x 20.0	RH2F100MFE	052245	100	RH2F100MFET	052245T	600
22	130	5	12.5 x 25.0	RH2F220MHE	052246	100	RH2F220MHET	052246T	400
33	160	7.5	16.0 x 25.0	RH2F330MPF	052247	100	RH2F330MPFT	052247T	180
47	210	7.5	16.0 x 31.5	RH2F470MRF	052248	50	-	-	-
100	335	7.5	18.0 x 35.5	RH2F101MVF	052249	50	-	-	-
350V									
0.47	11	2.5(5)	6.3 x 11.0	RH2VR47MBC	052131	200	RH2VR47MBET	052131T	1500
1.0	18	2.5(5)	6.3 x 11.0	RH2V010MBC	052132	200	RH2V010MBET	052132T	1500
2.2	30	3.5(5)	8.0 x 11.5	RH2V2R2MCD	052133	200	RH2V2R2MCET	052133T	1000
3.3	36	5	10.0 x 12.5	RH2V3R3MDE	052134	100	RH2V3R3MDET	052134T	600
4.7	47	5	10.0 x 16.0	RH2V4R7MEE	052140	100	RH2V4R7MEET	052140T	600
10	79	5	12.5 x 20.0	RH2V100MGE	052141	100	RH2V100MGET	052141T	400
22	130	5	12.5 x 25.0	RH2V220MHE	052142	100	RH2V220MHET	052142T	400
33	160	7.5	16.0 x 25.0	RH2V330MPF	052143	100	RH2V330MPFT	052143T	180
47	210	7.5	16.0 x 31.5	RH2V470MRF	052144	50	-	-	-
100	335	7.5	18.0 x 35.5	RH2V101MVF	052145	50	-	-	-
400V									
1.0	18	3.5(5)	8.0 x 11.5	RH2G010MCD	052146	200	RH2G010MCET	052146T	1000
2.2	30	5	10.0 x 12.5	RH2G2R2MDE	052147	100	RH2G2R2MDET	052147T	600
3.3	40	5	10.0 x 16.0	RH2G3R3MEE	052148	100	RH2G3R3MEET	052148T	600
4.7	52	5	10.0 x 20.0	RH2G4R7MFE	052149	100	RH2G4R7MFET	052149T	600
10	79	5	12.5 x 20.0	RH2G100MGE	052150	100	RH2G100MGET	052150T	400
22	130	7.5	16.0 x 25.0	RH2G220MPF	052151	100	RH2G220MPFT	052151T	180
33	175	7.5	16.0 x 31.5	RH2G330MRF	052152	50	-	-	-
47	220	7.5	18.0 x 35.5	RH2G470MVF	052153	50	-	-	-

(5) Leads pre-formed to 5mm pitch on taped part

PART NUMBER KEY
Refer to page 4



NOVER type R7

Sub-miniature, radial aluminium electrolytic capacitors with a 7mm can height. Offers high performance in applications where space is at a premium. Suitable for ambient temperatures up to 85°C. The entire range of available values and voltages in loose or taped formats, are shown on the following page. For lead forming, cropping and taping options refer to page 5.



- **Low profile** **7mm height**
- **Solvent resistant**
- **Maximum temperature** **85°C**
- **Capacitance tolerance** **20%**
- **Leakage current** **≤0.01CV**
- **Body colour** **Black**
- **Supplied loose or taped**

Specification

Conforms to JIS C5141-1982 Char.W

Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

Rated voltage	4.0V	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Tan δ (max)	0.35	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.08	

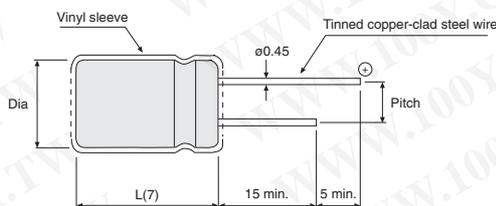
Surge voltage capability

Rated voltage	4.0V	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Surge voltage	5.0V	8V	13V	20V	32V	44V	63V	79V	125V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)			
		50/60	120	1K	10 ~ 100K
Rated Voltage (V)	4 ~ 16	0.8	1.0	1.1	1.2
	25 ~ 35	0.8	1.0	1.5	1.7
	50 ~ 100	0.8	1.0	1.6	1.9
Temperature coefficient					
Temperature (°C)		+70		+85	
Factor		1.35		1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L

◆ LEAD FORMING ◆
◆ CROPPING ◆
◆ TAPING ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 10µF 35V	Basic Anglia Code	Nover Letter
Cropped	0 5 6 0 3 5	C
Twisted & formed	0 5 6 0 3 5	W



NOVER type R7

Value (μ F)	Ripple Current (mA)	Dimensions (mm)		LOOSE			TAPED & BOXED		
		Pitch	Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
4.0 Volt									
33	35	1.5(5)	4.0 x 7.0	R70G330MJA	056071	200	R70G330MJET	056071T	2500
47	40	1.5(5)	4.0 x 7.0	R70G470MJA	056072	200	R70G470MJET	056072T	2500
100	70	2.0(5)	5.0 x 7.0	R70G101MKB	056073	200	R70G101MKET	056073T	2000
220	120	2.5(5)	6.3 x 7.0	R70G221MMC	056074	200	R70G221MMET	056074T	1500
6.3 Volt									
22	35	1.5(5)	4.0 x 7.0	R70J220MJA	056001	200	R70J220MJET	056001T	2500
33	40	1.5(5)	4.0 x 7.0	R70J330MJA	056002	200	R70J330MJET	056002T	2500
47	50	1.5(5)	4.0 x 7.0	R70J470MJA	056403	200	R70J470MJET	056403T	2500
47	50	2(5)	5.0 x 7.0	R70J470MKB	056003	200	R70J470MKET	056003T	2000
100	80	2(5)	5.0 x 7.0	R70J101MKB	056404	200	R70J101MKET	056404T	2000
100	80	2.5(5)	6.3 x 7.0	R70J101MMC	056004	200	R70J101MMET	056004T	1500
220	140	2.5(5)	6.3 x 7.0	R70J221MMC	056005	200	R70J221MMET	056005T	1500
10 Volt									
22	35	1.5(5)	4.0 x 7.0	R71A220MJA	056411	200	R71A220MJET	056411T	2500
22	35	2(5)	5.0 x 7.0	R71A220MKB	056011	200	R71A220MKET	056011T	2000
33	45	1.5(5)	4.0 x 7.0	R71A330MJA	056412	200	R71A330MJET	056412T	2500
33	45	2(5)	5.0 x 7.0	R71A330MKB	056012	200	R71A330MKET	056012T	2000
47	60	2(5)	5.0 x 7.0	R71A470MKB	056413	200	R71A470MKET	056413T	2000
47	60	2.5(5)	6.3 x 7.0	R71A470MMC	056013	200	R71A470MMET	056013T	1500
100	105	2.5(5)	6.3 x 7.0	R71A101MMC	056014	200	R71A101MMET	056014T	1500
16 Volt									
3.3	20	1.5(5)	4.0 x 7.0	R71C3R3MJA	056019	200	R71C3R3MJET	056019T	2500
10	25	1.5(5)	4.0 x 7.0	R71C100MJA	056021	200	R71C100MJET	056021T	2500
22	40	1.5(5)	4.0 x 7.0	R71C220MJA	056422	200	R71C220MJET	056422T	2500
22	40	2(5)	5.0 x 7.0	R71C220MKB	056022	200	R71C220MKET	056022T	2000
33	55	2(5)	5.0 x 7.0	R71C330MKB	056023	200	R71C330MKET	056023T	2000
47	70	2(5)	5.0 x 7.0	R71C470MKB	056424	200	R71C470MKET	056424T	2000
47	70	2.5(5)	6.3 x 7.0	R71C470MMC	056024	200	R71C470MMET	056024T	1500
100	120	2.5(5)	6.3 x 7.0	R71C101MMC	056025	200	R71C101MMET	056025T	1500
25 Volt									
3.3	15	1.5(5)	4.0 x 7.0	R71E3R3MJA	056029	200	R71E3R3MJET	056029T	2500
4.7	20	1.5(5)	4.0 x 7.0	R71E4R7MJA	056030	200	R71E4R7MJET	056030T	2500
10	25	1.5(5)	4.0 x 7.0	R71E100MJA	056431	200	R71E100MJET	056431T	2500
10	30	2(5)	5.0 x 7.0	R71E100MKB	056031	200	R71E100MKET	056031T	2000
22	50	2(5)	5.0 x 7.0	R71E220MKB	056432	200	R71E220MKET	056432T	2000
22	50	2.5(5)	6.3 x 7.0	R71E220MMC	056032	200	R71E220MMET	056032T	1500
33	70	2.5(5)	6.3 x 7.0	R71E330MMC	056033	200	R71E330MMET	056033T	1500
47	85	2.5(5)	6.3 x 7.0	R71E470MMC	056048	200	R71E470MMET	056048T	1500
35 Volt									
3.3	15	1.5(5)	4.0 x 7.0	R71V3R3MJA	056049	200	R71V3R3MJET	056049T	2500
4.7	20	1.5(5)	4.0 x 7.0	R71V4R7MJA	056034	200	R71V4R7MJET	056034T	2500
10	30	1.5(5)	4.0 x 7.0	R71V100MJA	056435	200	R71V100MJET	056435T	2500
10	30	2.0(5)	5.0 x 7.0	R71V100MKB	056035	200	R71V100MKET	056035T	2000
22	55	2.0(5)	5.0 x 7.0	R71V220MKB	056436	200	R71V220MKET	056436T	2000
22	55	2.5(5)	6.3 x 7.0	R71V220MMC	056036	200	R71V220MMET	056036T	1500
33	75	2.5(5)	6.3 x 7.0	R71V330MMC	056050	200	R71V330MMET	056050T	1500
50 Volt									
0.1	4	1.5(5)	4.0 x 7.0	R71HR10MJA	056051	200	R71HR10MJET	056051T	2500
0.22	5	1.5(5)	4.0 x 7.0	R71HR22MJA	056052	200	R71HR22MJET	056052T	2500
0.33	7	1.5(5)	4.0 x 7.0	R71HR33MJA	056053	200	R71HR33MJET	056053T	2500
0.47	8	1.5(5)	4.0 x 7.0	R71HR47MJA	056054	200	R71HR47MJET	056054T	2500
1.0	10	1.5(5)	4.0 x 7.0	R71H010MJA	056055	200	R71H010MJET	056055T	2500
2.2	15	1.5(5)	4.0 x 7.0	R71H2R2MJA	056056	200	R71H2R2MJET	056056T	2500
3.3	20	1.5(5)	4.0 x 7.0	R71H3R3MJA	056057	200	R71H3R3MJET	056057T	2500
4.7	24	1.5(5)	4.0 x 7.0	R71H4R7MJA	056444	200	R71H4R7MJET	056444T	2500
4.7	24	2.0(5)	5.0 x 7.0	R71H4R7MKB	056044	200	R71H4R7MKET	056044T	2000
10	40	2.5(5)	6.3 x 7.0	R71H100MMC	056045	200	R71H100MMET	056045T	1500
22	70	2.5(5)	6.3 x 7.0	R71H220MMC	056046	200	R71H220MMET	056046T	1500
63 Volt									
0.1	5	1.5(5)	4.0 x 7.0	R71JR10MJA	056037	200	R71JR10MJET	056037T	2500
0.22	8	1.5(5)	4.0 x 7.0	R71JR22MJA	056038	200	R71JR22MJET	056038T	2500
0.33	10	1.5(5)	4.0 x 7.0	R71JR33MJA	056039	200	R71JR33MJET	056039T	2500
0.47	10	1.5(5)	4.0 x 7.0	R71JR47MJA	056040	200	R71JR47MJET	056040T	2500
1.0	15	1.5(5)	4.0 x 7.0	R71J010MJA	056041	200	R71J010MJET	056041T	2500
2.2	20	1.5(5)	4.0 x 7.0	R71J2R2MJA	056042	200	R71J2R2MJET	056042T	2500
3.3	23	1.5(5)	4.0 x 7.0	R71J3R3MJA	056043	200	R71J3R3MJET	056043T	2500
4.7	30	2.0(5)	5.0 x 7.0	R71J4R7MKB	056058	200	R71J4R7MKET	056058T	2000
10	50	2.5(5)	6.3 x 7.0	R71J100MMC	056059	200	R71J100MMET	056059T	1500
100 Volt									
1.0	12	1.5(5)	4.0 x 7.0	R72A010MJA	056064	200	R72A010MJET	056064T	2500
2.2	20	2.0(5)	5.0 x 7.0	R72A2R2MKB	056065	200	R72A2R2MKET	056065T	2000
3.3	30	2.5(5)	6.3 x 7.0	R72A3R3MMC	056066	200	R72A3R3MMET	056066T	1500
4.7	35	2.5(5)	6.3 x 7.0	R72A4R7MMC	056067	200	R72A4R7MMET	056067T	1500

(5) Leads pre-formed to 5mm pitch on taped part



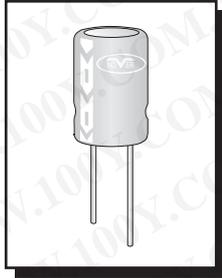
PART NUMBER KEY

Refer to page 4



NOVER type RJ

Based on the advanced design features of the R7 series, the RJ offers the additional advantage of 105°C ambient operational capability whilst retaining a 7mm can height. Suitable for applications where a greater temperature safety margin is required. The entire range of available values and voltages in loose and taped formats, are shown on the following page. For lead forming, cropping and taping options refer to page 5.



- **Low profile** **7mm height**
- **Solvent resistant**
- **High temperature** **105°C max.**
- **Capacitance tolerance** **20%**
- **Leakage current** **≤0.01CV**
- **Body colour** **Yellow**
- **Supplied loose or taped**

Specification

Conforms to JIS C5141-1982 Char.W
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 105°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +105°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Tan δ (max)	0.24	0.20	0.16	0.14	0.12	0.10	

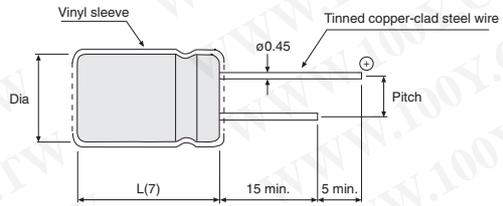
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)			
		50/60	120	1K	10 - 100K
Cap (µF)	0.1 ~ 47	0.8	1.0	1.3	1.5
	100 ~ 220	0.8	1.0	1.1	1.2
Temperature coefficient					
Temperature (°C)		+70	+85	+105	
Factor		2.0	1.7	1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L

◆ **LEAD FORMING** ◆
 ◆ **CROPPING** ◆
 ◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 10µF 35V		Nover Letter
	Basic Anglia Code	
Cropped	0 5 7 0 3 5	C
Twisted & formed	0 5 7 0 3 5	W



NOVER type RJ

Value (μF)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
6.3 Volt									
22	42	1.5(5)	4.0 x 7.0	RJ0J220MJA	057001	200	RJ0J220MJET	057001T	2500
33	50	1.5(5)	4.0 x 7.0	RJ0J330MJA	057402	200	RJ0J330MJET	057402T	2500
33	53	2(5)	5.0 x 7.0	RJ0J330MKB	057002	200	RJ0J330MKET	057002T	2000
47	64	2(5)	5.0 x 7.0	RJ0J470MKB	057003	200	RJ0J470MKET	057003T	2000
100	89	2(5)	5.0 x 7.0	RJ0J101MKB	057404	200	RJ0J101MKET	057404T	2000
100	96	2.5(5)	6.3 x 7.0	RJ0J101MMC	057004	200	RJ0J101MMET	057004T	1500
220	122	2.5(5)	6.3 x 7.0	RJ0J221MMC	057005	200	RJ0J221MMET	057005T	1500
10 Volt									
22	46	1.5(5)	4.0 x 7.0	RJ1A220MJA	057411	200	RJ1A220MJET	057411T	2500
22	49	2(5)	5.0 x 7.0	RJ1A220MKB	057011	200	RJ1A220MKET	057011T	2000
33	60	2(5)	5.0 x 7.0	RJ1A330MKB	057012	200	RJ1A330MKET	057012T	2000
47	89	2(5)	5.0 x 7.0	RJ1A470MKB	057413	200	RJ1A470MKET	057413T	2000
47	95	2.5(5)	6.3 x 7.0	RJ1A470MMC	057013	200	RJ1A470MMET	057013T	1500
100	116	2.5(5)	6.3 x 7.0	RJ1A101MMC	057014	200	RJ1A101MMET	057014T	1500
16 Volt									
10	39	1.5(5)	4.0 x 7.0	RJ1C100MJA	057021	200	RJ1C100MJET	057021T	2500
22	46	1.5(5)	4.0 x 7.0	RJ1C220MJA	057422	200	RJ1C220MJET	057422T	2500
22	49	2(5)	5.0 x 7.0	RJ1C220MKB	057022	200	RJ1C220MKET	057022T	2000
33	78	2(5)	5.0 x 7.0	RJ1C330MKB	057423	200	RJ1C330MKET	057423T	2000
33	83	2.5(5)	6.3 x 7.0	RJ1C330MMC	057023	200	RJ1C330MMET	057023T	1500
47	89	2(5)	5.0 x 7.0	RJ1C470MKB	057424	200	RJ1C470MKET	057424T	2000
47	95	2.5(5)	6.3 x 7.0	RJ1C470MMC	057024	200	RJ1C470MMET	057024T	1500
100	116	2.5(5)	6.3 x 7.0	RJ1C101MMC	057025	200	RJ1C101MMET	057025T	1500
25 Volt									
10	30	1.5(5)	4.0 x 7.0	RJ1E100MJA	057431	200	RJ1E100MJET	057431T	2500
10	47	2(5)	5.0 x 7.0	RJ1E100MKB	057031	200	RJ1E100MKET	057031T	2000
22	82	2(5)	5.0 x 7.0	RJ1E220MKB	057432	200	RJ1E220MKET	057432T	2000
22	87	2.5(5)	6.3 x 7.0	RJ1E220MMC	057032	200	RJ1E220MMET	057032T	1500
33	90	2.5(5)	6.3 x 7.0	RJ1E330MMC	057033	200	RJ1E330MMET	057033T	1500
35 Volt									
4.7	25	1.5(5)	4.0 x 7.0	RJ1V4R7MJA	057034	200	RJ1V4R7MJET	057034T	2500
10	45	1.5(5)	4.0 x 7.0	RJ1V100MJA	057435	200	RJ1V100MJET	057435T	2500
10	48	2(5)	5.0 x 7.0	RJ1V100MKB	057035	200	RJ1V100MKET	057035T	2000
22	90	2.5(5)	6.3 x 7.0	RJ1V220MMC	057036	200	RJ1V220MMET	057036T	1500
50 Volt									
0.1	5	1.5(5)	4.0 x 7.0	RJ1HR10MJA	057051	200	RJ1HR10MJET	057051T	2500
0.22	8	1.5(5)	4.0 x 7.0	RJ1HR22MJA	057052	200	RJ1HR22MJET	057052T	2500
0.33	10	1.5(5)	4.0 x 7.0	RJ1HR33MJA	057053	200	RJ1HR33MJET	057053T	2500
0.47	12	1.5(5)	4.0 x 7.0	RJ1HR47MJA	057054	200	RJ1HR47MJET	057054T	2500
1.0	16	1.5(5)	4.0 x 7.0	RJ1H010MJA	057055	200	RJ1H010MJET	057055T	2500
2.2	25	1.5(5)	4.0 x 7.0	RJ1H2R2MJA	057056	200	RJ1H2R2MJET	057056T	2500
3.3	28	1.5(5)	4.0 x 7.0	RJ1H3R3MJA	057057	200	RJ1H3R3MJET	057057T	2500
4.7	48	2(5)	5.0 x 7.0	RJ1H4R7MKB	057044	200	RJ1H4R7MKET	057044T	2000
10	75	2.5(5)	6.3 x 7.0	RJ1H100MMC	057045	200	RJ1H100MMET	057045T	1500

(5) Leads pre-formed to 5mm pitch on taped part



NOVER type R5

A range of ultra-miniature radial aluminium electrolytic capacitors evolving from the advanced features of the R7 series and offering a very low profile of only 5mm. The entire range of available values and voltages in loose or taped formats, are shown on the following page. For lead forming, cropping and taping options refer to page 5.



- **Very low profile** **5mm height**
- Solvent resistant
- Capacitance tolerance **20%**
- Leakage current **≤0.01CV**
- Body colour **Indigo**
- Supplied loose or taped

Specification

Conforms to JIS C5141-1982 Char.W

Endurance test 1000 hours at 85°C

Capacitance tolerance ±20% at 120Hz, 20°C

Ripple current (as listed) measured at 120Hz, 85°C
(see also Multiplier table below)

Operating temperature range -40°C to +85°C

Leakage current ≤0.01CV or 3µA
(whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Tan δ (max)	0.26	0.22	0.18	0.14	0.12	0.10	

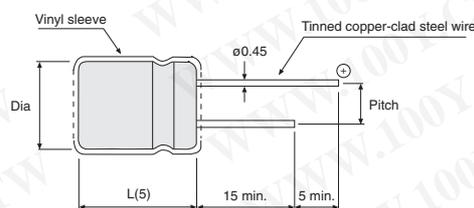
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)			
		50/60	120	1K	10 ~ 100K
Cap (µF)	0.1 ~ 47	0.8	1.0	1.3	1.5
	100	0.8	1.0	1.15	1.2
Temperature coefficient					
Temperature (°C)		+70		+85	
Factor		1.35		1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L

◆ **LEAD FORMING** ◆

◆ **CROPPING** ◆

◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 33µF 10V		
	Basic Anglia Code	Nover Letter
Cropped	0 6 3 0 1 2	C
Twisted & formed	0 6 3 0 1 2	W



NOVER type R5

Value (μ F)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
6.3 Volt									
22	22	1.5(5)	4.0 x 5.0	R50J220MF1A	063001	200	R50J220MF1ET	063001T	2500
33	34	2(5)	5.0 x 5.0	R50J330MF2B	063002	200	R50J330MF2ET	063002T	2000
47	37	2(5)	5.0 x 5.0	R50J470MF2B	063003	200	R50J470MF2ET	063003T	2000
100	58	2(5)	5.0 x 5.0	R50J101MF2B	063404	200	R50J101MF2ET	063404T	2000
100	62	2.5(5)	6.3 x 5.0	R50J101MF3C	063004	200	R50J101MF3ET	063004T	1500
10 Volt									
10	16	1.5(5)	4.0 x 5.0	R51A100MF1A	063010	200	R51A100MF1ET	063010T	2500
22	28	1.5(5)	4.0 x 5.0	R51A220MF1A	063411	200	R51A220MF1ET	063411T	2500
22	30	2(5)	5.0 x 5.0	R51A220MF2B	063011	200	R51A220MF2ET	063011T	2000
33	45	2(5)	5.0 x 5.0	R51A330MF2B	063012	200	R51A330MF2ET	063012T	2000
47	48	2(5)	5.0 x 5.0	R51A470MF2B	063413	200	R51A470MF2ET	063413T	2000
47	50	2.5(5)	6.3 x 5.0	R51A470MF3C	063013	200	R51A470MF3ET	063013T	1500
16 Volt									
4.7	11	1.5(5)	4.0 x 5.0	R51C4R7MF1A	063020	200	R51C4R7MF1ET	063020T	2500
10	18	1.5(5)	4.0 x 5.0	R51C100MF1A	063021	200	R51C100MF1ET	063021T	2500
22	33	1.5(5)	4.0 x 5.0	R51C220MF1A	063422	200	R51C220MF1ET	063422T	2500
22	35	2(5)	5.0 x 5.0	R51C220MF2B	063022	200	R51C220MF2ET	063022T	2000
33	48	2(5)	5.0 x 5.0	R51C330MF2B	063423	200	R51C330MF2ET	063423T	2000
33	51	2.5(5)	6.3 x 5.0	R51C330MF3C	063023	200	R51C330MF3ET	063023T	1500
47	61	2(5)	5.0 x 5.0	R51C470MF2B	063424	200	R51C470MF2ET	063424T	2000
47	65	2.5(5)	6.3 x 5.0	R51C470MF3C	063024	200	R51C470MF3ET	063024T	1500
25 Volt									
4.7	13	1.5(5)	4.0 x 5.0	R51E4R7MF1A	063030	200	R51E4R7MF1ET	063030T	2500
10	25	1.5(5)	4.0 x 5.0	R51E100MF1A	063431	200	R51E100MF1ET	063431T	2500
10	27	2(5)	5.0 x 5.0	R51E100MF2B	063031	200	R51E100MF2ET	063031T	2000
22	43	2(5)	5.0 x 5.0	R51E220MF2B	063432	200	R51E220MF2ET	063432T	2000
22	46	2.5(5)	6.3 x 5.0	R51E220MF3C	063032	200	R51E220MF3ET	063032T	1500
33	54	2.5(5)	6.3 x 5.0	R51E330MF3C	063033	200	R51E330MF3ET	063033T	1500
35 Volt									
3.3	12	1.5(5)	4.0 x 5.0	R51V3R3MF1A	063049	200	R51V3R3MF1ET	063049T	2500
4.7	14	1.5(5)	4.0 x 5.0	R51V4R7MF1A	063034	200	R51V4R7MF1ET	063034T	2500
10	27	2(5)	5.0 x 5.0	R51V100MF2B	063035	200	R51V100MF2ET	063035T	2000
22	46	2.5(5)	6.3 x 5.0	R51V220MF3C	063036	200	R51V220MF3ET	063036T	1500
50 Volt									
0.1	1	1.5(5)	4.0 x 5.0	R51HR10MF1A	063051	200	R51HR10MF1ET	063051T	2500
0.22	1.5	1.5(5)	4.0 x 5.0	R51HR22MF1A	063052	200	R51HR22MF1ET	063052T	2500
0.33	2.5	1.5(5)	4.0 x 5.0	R51HR33MF1A	063053	200	R51HR33MF1ET	063053T	2500
0.47	4	1.5(5)	4.0 x 5.0	R51HR47MF1A	063054	200	R51HR47MF1ET	063054T	2500
1.0	6	1.5(5)	4.0 x 5.0	R51H010MF1A	063055	200	R51H010MF1ET	063055T	2500
2.2	7	1.5(5)	4.0 x 5.0	R51H2R2MF1A	063056	200	R51H2R2MF1ET	063056T	2500
3.3	13	1.5(5)	4.0 x 5.0	R51H3R3MF1A	063057	200	R51H3R3MF1ET	063057T	2500
4.7	18	1.5(5)	4.0 x 5.0	R51H4R7MF1A	063444	200	R51H4R7MF1ET	063444T	2500
4.7	20	2(5)	5.0 x 5.0	R51H4R7MF2B	063044	200	R51H4R7MF2ET	063044T	2000
10	31	2.5(5)	6.3 x 5.0	R51H100MF3C	063045	200	R51H100MF3ET	063045T	1500

(5) Leads pre-formed to 5mm pitch on taped part



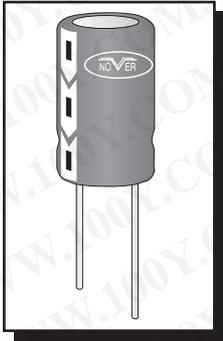
PART NUMBER KEY

Refer to page 4



NOVER type LL

Low leakage, radial aluminium electrolytic capacitors suitable for timing circuits, low signal coupling or any application where high stability is required. The LL series also offers a potential alternative to tantalum capacitors in many instances where cost is at a premium. The entire range of available values and voltages in loose or taped formats, are shown on the following page. For lead forming, cropping and taping options refer to page 5.



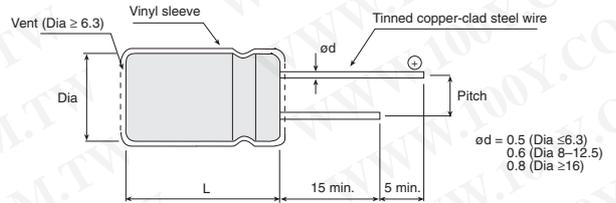
- Low leakage $\leq 0.002CV$
- Stable during storage
- Solvent resistant
- Maximum temperature **85°C**
- Capacitance tolerance **20%**
- Body colour **Orange**
- Supplied loose or taped

Specification

Conforms to JIS C5141-1982 Char.W
 Endurance test 1000 hours at 85°C
 Capacitance tolerance $\pm 20\%$ at 120Hz, 20°C †
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C
 Leakage current $\leq 0.002CV$ or $0.3\mu A$
 (whichever is greater) after 2 min.

† $\pm 10\%$ available to special order

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L \geq 20)

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000 μF above 1000 μF

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Tan δ (max)*	0.20	0.17	0.13	0.10	0.10	0.08	

Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	35V	50V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	d.c.

Multiplier for ripple current

Frequency coefficient							
Rated Voltage (V)	Freq(Hz) CV($\mu F W V$)	50/60	120	1K	10K	100K	
		6.3 ~ 10		0.8	1.0	1.1	1.2
16 ~ 25	≤ 1000	0.8	1.0	1.5	1.7	1.7	
	> 1000	0.8	1.0	1.2	1.3	1.3	
35 ~ 50		0.8	1.0	1.6	1.9	1.9	
Temperature coefficient							
Temperature (°C)		+70			+85		
Factor		1.35			1.0		

◆ LEAD FORMING ◆
 ◆ CROPPING ◆
 ◆ TAPING ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 100μF 10V	Nover Letter
Basic Anglia Code	
Cropped	0 5 9 0 1 0 C
Twisted & formed	0 5 9 0 1 0 W



NOVER type LL

Value (μ F)	Ripple Current (mA)	Dimensions (mm) Pitch Dia. x L		LOOSE			TAPED & BOXED		
				Nover Part No.	Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code	Box Qty pcs
6.3 Volt									
220	240	3.5(5)	8.0 x 11.5	LL0J221MCD	059002	200	LL0J221MCET	059002T	1000
330	300	3.5(5)	8.0 x 11.5	LL0J331MCD	059003	200	LL0J331MCET	059003T	1000
470	420	5	10.0 x 12.5	LL0J471MDE	059004	100	LL0J471MDET	059004T	600
1000	740	5	10.0 x 20.0	LL0J102MFE	059005	100	LL0J102MFET	059005T	600
2200	1220	5	12.5 x 20.0	LL0J222MGE	059006	100	LL0J222MGET	059006T	400
10 Volt									
22	56	2(5)	5.0 x 11.0	LL1A220MAB	059007	200	LL1A220MAET	059007T	2000
33	70	2(5)	5.0 x 11.0	LL1A330MAB	059008	200	LL1A330MAET	059008T	2000
47	80	2(5)	5.0 x 11.0	LL1A470MAB	059009	200	LL1A470MAET	059009T	2000
100	140	2.5(5)	6.3 x 11.0	LL1A101MBC	059010	200	LL1A101MBET	059010T	1500
220	240	3.5(5)	8.0 x 11.5	LL1A221MCD	059011	200	LL1A221MCET	059011T	1000
330	380	5	10.0 x 12.5	LL1A331MDE	059012	100	LL1A331MDET	059012T	600
470	500	5	10.0 x 16.0	LL1A471MEE	059013	100	LL1A471MEET	059013T	600
1000	910	5	12.5 x 20.0	LL1A102MGE	059014	100	LL1A102MGET	059014T	400
2200	1710	5	12.5 x 25.0	LL1A222MHE	059015	100	LL1A222MHET	059015T	400
16 Volt									
10	43	2(5)	5.0 x 11.0	LL1C100MAB	059016	200	LL1C100MAET	059016T	2000
22	74	2(5)	5.0 x 11.0	LL1C220MAB	059017	200	LL1C220MAET	059017T	2000
33	80	2(5)	5.0 x 11.0	LL1C330MAB	059018	200	LL1C330MAET	059018T	2000
47	90	2(5)	5.0 x 11.0	LL1C470MAB	059019	200	LL1C470MAET	059019T	2000
100	200	3.5(5)	8.0 x 11.5	LL1C101MCD	059020	200	LL1C101MCET	059020T	1000
220	360	5	10.0 x 12.5	LL1C221MDE	059021	100	LL1C221MDET	059021T	600
330	500	5	10.0 x 16.0	LL1C331MEE	059022	100	LL1C331MEET	059022T	600
470	620	5	10.0 x 20.0	LL1C471MFE	059023	100	LL1C471MFET	059023T	600
1000	1040	5	12.5 x 25.0	LL1C102MHE	059024	100	LL1C102MHET	059024T	400
2200	1900	7.5	16.0 x 31.5	LL1C222MRF	059025	50	-	-	-
25 Volt									
4.7	34	2(5)	5.0 x 11.0	LL1E4R7MAB	059026	200	LL1E4R7MAET	059026T	2000
10	52	2(5)	5.0 x 11.0	LL1E100MAB	059027	200	LL1E100MAET	059027T	2000
22	72	2(5)	5.0 x 11.0	LL1E220MAB	059028	200	LL1E220MAET	059028T	2000
33	100	2.5(5)	6.3 x 11.0	LL1E330MBC	059029	200	LL1E330MBET	059029T	1500
47	114	2.5(5)	6.3 x 11.0	LL1E470MBC	059030	200	LL1E470MBET	059030T	1500
100	210	3.5(5)	8.0 x 11.5	LL1E101MCD	059031	200	LL1E101MCET	059031T	1000
220	400	5	10.0 x 16.0	LL1E221MEE	059032	100	LL1E221MEET	059032T	600
330	540	5	10.0 x 20.0	LL1E331MFE	059033	100	LL1E331MFET	059033T	600
470	740	5	12.5 x 20.0	LL1E471MGE	059034	100	LL1E471MGET	059034T	400
1000	1350	7.5	16.0 x 25.0	LL1E102MPF	059035	100	-	-	-
35 Volt									
4.7	34	2(5)	5.0 x 11.0	LL1V4R7MAB	059036	200	LL1V4R7MAET	059036T	2000
10	52	2(5)	5.0 x 11.0	LL1V100MAB	059037	200	LL1V100MAET	059037T	2000
22	74	2.5(5)	6.3 x 11.0	LL1V220MBC	059038	200	LL1V220MBET	059038T	1500
33	100	2.5(5)	6.3 x 11.0	LL1V330MBC	059039	200	LL1V330MBET	059039T	1500
47	150	3.5(5)	8.0 x 11.5	LL1V470MCD	059040	200	LL1V470MCET	059040T	1000
100	260	5	10.0 x 12.5	LL1V101MDE	059041	100	LL1V101MDET	059041T	600
220	460	5	10.0 x 20.0	LL1V221MFE	059042	100	LL1V221MFET	059042T	600
330	650	5	12.5 x 20.0	LL1V331MGE	059043	100	LL1V331MGET	059043T	400
470	850	5	12.5 x 25.0	LL1V471MHE	059044	100	LL1V471MHET	059044T	400
1000	1550	7.5	16.0 x 25.0	LL1V102MPF	059045	50	-	-	-
50 Volt									
0.1	5	2(5)	5.0 x 11.0	LL1HR10MAB	059046	200	LL1HR10MAET	059046T	2000
0.22	7	2(5)	5.0 x 11.0	LL1HR22MAB	059047	200	LL1HR22MAET	059047T	2000
0.33	9	2(5)	5.0 x 11.0	LL1HR33MAB	059048	200	LL1HR33MAET	059048T	2000
0.47	14	2(5)	5.0 x 11.0	LL1HR47MAB	059049	200	LL1HR47MAET	059049T	2000
1.0	20	2(5)	5.0 x 11.0	LL1H010MAB	059050	200	LL1H010MAET	059050T	2000
2.2	26	2(5)	5.0 x 11.0	LL1H2R2MAB	059051	200	LL1H2R2MAET	059051T	2000
3.3	32	2(5)	5.0 x 11.0	LL1H3R3MAB	059052	200	LL1H3R3MAET	059052T	2000
4.7	43	2(5)	5.0 x 11.0	LL1H4R7MAB	059053	200	LL1H4R7MAET	059053T	2000
10	70	2(5)	5.0 x 11.0	LL1H100MAB	059054	200	LL1H100MAET	059054T	2000
22	110	3.5(5)	8.0 x 11.5	LL1H220MCD	059055	200	LL1H220MCET	059055T	1000
33	160	5	10.0 x 12.5	LL1H330MDE	059056	100	LL1H330MDET	059056T	600
47	210	5	10.0 x 16.0	LL1H470MEE	059057	100	LL1H470MEET	059057T	600
100	380	5	12.5 x 20.0	LL1H101MGE	059058	100	LL1H101MGET	059058T	400
220	720	7.5	16.0 x 25.0	LL1H221MPF	059059	100	LL1H221MPFT	059059T	180
330	880	7.5	16.0 x 25.0	LL1H331MPF	059060	100	LL1H331MPFT	059060T	180
470	1150	7.5	16.0 x 31.5	LL1H471MRF	059061	50	-	-	-

(5) Leads pre-formed to 5mm pitch on taped part



NOVER type RL

A range of high performance radial aluminium electrolytic capacitors featuring excellent low impedance and ESR characteristics. The RL range further benefits from having a 105°C operating temperature range making it especially suitable for switch mode power supplies (SMPS). The entire range of available values and voltages in loose or taped formats, are shown on the following pages. For lead forming, cropping and taping options refer to page 5.



- **Low impedance**
- **Endurance** **2000 hours at 105°C**
- **High ripple current**
- **High performance and reliability**
- **For switch mode power supplies (SMPS) and industrial electronics**
- **Capacitance tolerance** **20%**
- **Body colour** **Brown**
- **Supplied loose or taped**

Specification

Conforms to JIS C5141-1982 Char.W

Endurance test 2000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 100kHz, 105°C
 (see also Multiplier table below)
 Impedance (as listed) measured at 100kHz
 Operating temperature range -55°C to +105°C
 Leakage current ≤0.01CV or 0.3µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

* Add 0.02 for every 1000µF above 1000µF

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Tan δ (max)*	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	

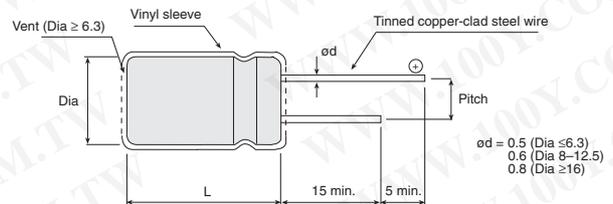
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	40V	50V	63V	100V	d.c.
Surge voltage	8V	13V	20V	32V	50V	63V	79V	125V	d.c.

Multiplier for ripple current

Frequency coefficient				
Freq(Hz)	120	1K	10K	100K
0.47 ~ 4.7	0.40	0.68	0.78	1.0
5.6 ~ 47	0.50	0.76	0.87	1.0
56 ~ 270	0.70	0.85	0.90	1.0
330 ~ 1000	0.80	0.93	0.98	1.0
1200 ~ 15000	0.90	0.95	1.0	1.0
Temperature coefficient				
Temperature (°C)	+70	+85	+105	
Factor	1.96	1.68	1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L ≥ 20)

◆ **LEAD FORMING** ◆
 ◆ **CROPPING** ◆
 ◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 270µF 16V		
	Basic Anglia Code	Nover Letter
Cropped	0 6 0 0 3 4	C
Twisted & formed	0 6 0 0 3 4	W



NOVER type RL

Value (µF)	Ripple Current (mA)	Impedance (Ω)		Dimensions (mm)		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs
		20°C	-10°C	Pitch	Dia. x L	Nover Part No.	Anglia Order Code		Nover Part No.	Anglia OrderCode	
6.3 Volt											
100	175	0.65	1.30	2(5)	5.0 x 11.5	RL0J101MAB	060305	200	RL0J101MAET	060305T	2000
150	235	0.46	0.92	2.5(5)	6.3 x 11.5	RL0J151MBC	060307	200	RL0J151MBET	060307T	1500
220	290	0.30	0.60	2.5(5)	6.3 x 11.5	RL0J221MBC	060309	200	RL0J221MBET	060309T	1500
330	400	0.20	0.40	2.5(5)	6.3 x 11.5	RL0J331MBC	060311	200	RL0J331MBET	060311T	1500
470	488	0.17	0.34	3.5(5)	8.0 x 12.0	RL0J471MCD	060312	200	RL0J471MCET	060312T	1000
680	613	0.12	0.24	5	10.0 x 12.5	RL0J681MDE	060313	100	RL0J681MDET	060313T	600
820	734	0.095	0.19	5	10.0 x 16.0	RL0J821MEE	060314	100	RL0J821MEET	060314T	600
1000	800	0.076	0.152	3.5(5)	8.0 x 12.0	RL0J102MCD	060315	200	RL0J102MCET	060315T	1000
1000	820	0.068	0.136	3.5(5)	8.0 x 15.0	RL0J102MQD	060355	200	RL0J102MQET	060355T	1000
1200	980	0.052	0.104	3.5(5)	8.0 x 20.0	RL0J122MSD	060316	200	RL0J122MSET	060316T	1000
1200	1010	0.046	0.092	5	10.0 x 16.0	RL0J122MEE	060356	100	RL0J122MEET	060356T	600
1500	1160	0.042	0.084	3.5(5)	8.0 x 20.0	RL0J152MSD	060317	200	RL0J152MSET	060317T	1000
1500	1190	0.038	0.076	5	10.0 x 20.0	RL0J152MFE	060358	100	RL0J152MFET	060358T	600
2200	1440	0.032	0.064	5	12.5 x 20.0	RL0J222MGE	060318	100	RL0J222MGET	060318T	400
2700	1690	0.028	0.056	5	12.5 x 25.0	RL0J272MHE	060319	100	RL0J272MHET	060319T	400
3300	1860	0.026	0.052	5	12.5 x 25.0	RL0J332MHE	060320	100	RL0J332MHET	060320T	400
3900	1950	0.024	0.048	5	12.5 x 30.0	RL0J392MXE	060321	100	-	-	-
4700	2220	0.022	0.044	5	12.5 x 35.0	RL0J472MTE	060322	100	-	-	-
5600	2390	0.020	0.040	5	12.5 x 40.0	RL0J562MZE	060323	100	-	-	-
6800	2350	0.018	0.036	7.5	16.0 x 31.5	RL0J682MRF	060324	50	-	-	-
8200	2550	0.016	0.032	7.5	16.0 x 35.5	RL0J822MA3F	060325	50	-	-	-
10000	2410	0.014	0.028	7.5	18.0 x 31.5	RL0J103MA8F	060326	50	-	-	-
12000	2970	0.012	0.024	7.5	16.0 x 40.0	RL0J123MA4F	060327	50	-	-	-
15000	3010	0.010	0.020	7.5	18.0 x 40.0	RL0J153MA9F	060328	50	-	-	-
10 Volt											
82	175	0.65	1.30	2(5)	5.0 x 11.5	RL1A820MAB	060006	200	RL1A820MAET	060006T	2000
100	235	0.46	0.92	2(5)	5.0 x 11.5	RL1A101MAB	060007	200	RL1A101MAET	060007T	2000
180	290	0.31	0.62	2.5(5)	6.3 x 11.5	RL1A181MBC	060008	200	RL1A181MBET	060008T	1500
220	400	0.20	0.40	2.5(5)	6.3 x 11.5	RL1A221MBC	060009	200	RL1A221MBET	060009T	1500
330	490	0.17	0.34	3.5(5)	8.0 x 12.0	RL1A331MCD	060010	200	RL1A331MCET	060010T	1000
470	615	0.14	0.28	3.5(5)	8.0 x 12.0	RL1A471MCD	060011	200	RL1A471MCET	060011T	1000
470	617	0.13	0.26	3.5(5)	8.0 x 15.0	RL1A471MQD	060362	200	RL1A471MQET	060362T	1000
560	734	0.095	0.19	3.5(5)	8.0 x 15.0	RL1A561MQD	060012	200	RL1A561MQET	060012T	1000
680	800	0.095	0.19	3.5(5)	8.0 x 20.0	RL1A681MSD	060013	200	RL1A681MSET	060013T	1000
1000	1010	0.080	0.12	5	10.0 x 16.0	RL1A102MEE	060014	100	RL1A102MEET	060014T	600
1200	1190	0.048	0.096	5	10.0 x 20.0	RL1A122MFE	060015	100	RL1A122MFET	060015T	600
1500	1440	0.032	0.064	5	10.0 x 20.0	RL1A152MFE	060016	100	RL1A152MFET	060016T	600
1800	1520	0.030	0.060	5	12.5 x 20.0	RL1A182MGE	060017	100	RL1A182MGET	060017T	400
2200	1690	0.028	0.056	5	12.5 x 25.0	RL1A222MGE	060018	100	RL1A222MGET	060018T	400
2700	1950	0.026	0.052	5	12.5 x 30.0	RL1A272MXE	060019	100	-	-	-
3300	2220	0.024	0.048	5	12.5 x 35.0	RL1A332MTE	060020	100	-	-	-
3900	2390	0.022	0.044	5	12.5 x 40.0	RL1A392MZE	060021	100	-	-	-
4700	2410	0.018	0.036	7.5	16.0 x 25.0	RL1A472MPF	060022	100	RL1A472MPFT	060022T	180
5600	2530	0.017	0.034	7.5	16.0 x 31.5	RL1A562MRF	060023	50	-	-	-
6800	2680	0.016	0.032	7.5	18.0 x 31.5	RL1A682MA8F	060024	50	-	-	-
8200	2970	0.014	0.028	7.5	18.0 x 35.5	RL1A822MVF	060025	50	-	-	-
10000	3010	0.012	0.024	7.5	18.0 x 40.0	RL1A103MA9F	060026	50	-	-	-

(5) Leads pre-formed to 5mm pitch on taped part

RL continued overleaf > > >



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NOVER type RL (continued)

Value (μ F)	Ripple Current (mA)	Impedance (Ω)		Dimensions (mm)		LOOSE		TAPED & BOXED		Box Qty pcs	
		20°C	-10°C	Pitch	Dia. x L	Novor Part No.	Anglia Order Code	Novor Part No.	Anglia Order Code		
16 Volt											
56	175	0.65	1.30	2(5)	5.0 x 11.5	RL1C560MAB	060030	200	RL1C560MAET	060030T	2000
82	235	0.46	0.92	2.5(5)	6.3 x 11.5	RL1C820MBC	060031	200	RL1C820MBET	060031T	1500
120	290	0.31	0.62	2.5(5)	6.3 x 11.5	RL1C121MBC	060032	200	RL1C121MBET	060032T	1500
180	400	0.20	0.40	3.5(5)	8.0 x 12.0	RL1C181MCD	060033	200	RL1C181MCET	060033T	1000
270	501	0.17	0.34	3.5(5)	8.0 x 12.0	RL1C271MCD	060034	200	RL1C271MCET	060034T	1000
330	575	0.13	0.26	3.5(5)	8.0 x 15.0	RL1C331MQD	060035	200	RL1C331MQET	060035T	1000
330	625	0.13	0.26	5	10.0 x 12.5	RL1C331MDE	060801	100	RL1C331MDET	060801T	600
390	795	0.090	0.18	5	10.0 x 16.0	RL1C391MEE	060037	100	RL1C391MEET	060037T	600
470	760	0.095	0.19	3.5(5)	8.0 x 12.0	RL1C471MCD	060067	200	RL1C471MCET	060067T	1000
470	760	0.095	0.19	3.5(5)	8.0 x 20.0	RL1C471MSD	060038	200	RL1C471MSET	060038T	1000
680	1010	0.065	0.13	5	10.0 x 20.0	RL1C681MFE	060039	100	RL1C681MFET	060039T	600
680	1010	0.065	0.13	5	12.5 x 15.0	RL1C681MWE	060802	100	RL1C681MWET	060802T	400
820	1190	0.055	0.11	5	10.0 x 25.0	RL1C821MYE	060041	100	RL1C821MYET	060041T	600
1200	1430	0.047	0.094	5	10.0 x 30.0	RL1C122MUE	060042	100	RL1C122MUET	060042T	600
1200	1400	0.042	0.084	5	12.5 x 20.0	RL1C122MGE	060803	100	RL1C122MGET	060803T	400
1500	1690	0.038	0.076	5	12.5 x 25.0	RL1C152MHE	060043	100	RL1C152MHET	060043T	400
1500	1340	0.046	0.092	7.5	16.0 x 15.0	RL1C152MA1F	060804	100	RL1C152MA1FT	060804T	180
1500	1500	0.043	0.086	7.5	18.0 x 15.0	RL1C152MA5F	060805	50	-	-	-
2200	1950	0.032	0.064	5	12.5 x 30.0	RL1C222MXE	060044	100	-	-	-
2200	1730	0.034	0.068	7.5	16.0 x 20.0	RL1C222MA2F	060806	100	RL1C222MA2FT	060806T	180
2700	2200	0.028	0.056	5	12.5 x 35.0	RL1C272MTE	060045	50	-	-	-
2700	2070	0.028	0.056	7.5	16.0 x 25.0	RL1C272MPF	060807	100	RL1C272MPFT	060807T	180
2700	1870	0.030	0.060	7.5	18.0 x 20.0	RL1C272MA6F	060808	50	-	-	-
3300	2390	0.026	0.052	5	12.5 x 40.0	RL1C332MZE	060046	50	-	-	-
3900	2350	0.025	0.050	7.5	16.0 x 31.5	RL1C392MRF	060047	50	-	-	-
3900	2160	0.027	0.054	7.5	18.0 x 25.0	RL1C392MA7F	060809	50	-	-	-
4700	2550	0.022	0.044	7.5	16.0 x 35.5	RL1C472MA3F	060048	50	-	-	-
4700	2450	0.023	0.046	7.5	18.0 x 31.5	RL1C472MA8F	060810	50	-	-	-
5600	2900	0.020	0.020	7.5	16.0 x 40.0	RL1C562MA4F	060049	50	-	-	-
6800	2730	0.019	0.038	7.5	18.0 x 35.5	RL1C682MVF	060050	50	-	-	-
8200	3060	0.018	0.036	7.5	18.0 x 40.0	RL1C822MA9F	060051	50	-	-	-
25 Volt											
39	175	0.65	1.30	2(5)	5.0 x 11.5	RL1E390MAB	060057	200	RL1E390MAET	060057T	2000
56	235	0.46	0.92	2.5(5)	6.3 x 11.5	RL1E560MBC	060058	200	RL1E560MBET	060058T	1500
82	290	0.31	0.62	2.5(5)	6.3 x 11.5	RL1E820MBC	060059	200	RL1E820MBET	060059T	1500
120	400	0.20	0.40	3.5(5)	8.0 x 12.0	RL1E121MCD	060060	200	RL1E121MCET	060060T	1000
180	503	0.17	0.34	3.5(5)	8.0 x 12.0	RL1E181MCD	060061	200	RL1E181MCET	060061T	1000
220	575	0.13	0.26	3.5(5)	8.0 x 15.0	RL1E221MQD	060062	200	RL1E221MQET	060062T	1000
220	629	0.12	0.24	5	10.0 x 12.5	RL1E221MDE	060815	100	RL1E221MDET	060815T	600
270	795	0.090	0.18	5	10.0 x 16.0	RL1E271MEE	060063	100	RL1E271MEET	060063T	600
330	751	0.095	0.19	3.5(5)	8.0 x 15.0	RL1E331MQD	060097	200	RL1E331MQET	060097T	1000
330	751	0.095	0.19	3.5(5)	8.0 x 20.0	RL1E331MSD	060064	200	RL1E331MSET	060064T	1000
470	1010	0.065	0.13	5	10.0 x 20.0	RL1E471MFE	060065	100	RL1E471MFET	060065T	600
470	1010	0.065	0.13	5	12.5 x 15.0	RL1E471MWE	060816	100	RL1E471MWET	060816T	400
560	1190	0.055	0.11	5	10.0 x 25.0	RL1E561MYE	060066	100	RL1E561MYET	060066T	600
820	1440	0.045	0.090	5	10.0 x 30.0	RL1E821MUE	060068	100	RL1E821MUET	060068T	600
820	1400	0.042	0.084	5	12.5 x 20.0	RL1E821MGE	060817	100	RL1E821MGET	060817T	400
820	1360	0.046	0.092	7.5	16.0 x 15.0	RL1E821MA1F	060818	100	RL1E821MA1FT	060818T	180
1000	1690	0.036	0.072	5	12.5 x 25.0	RL1E102MHE	060069	100	RL1E102MHET	060069T	400
1200	1500	0.043	0.086	7.5	18.0 x 15.0	RL1E122MA5F	060070	50	-	-	-
1500	1950	0.030	0.060	5	12.5 x 30.0	RL1E152MXE	060071	100	-	-	-
1500	1730	0.034	0.068	7.5	16.0 x 20.0	RL1E152MA2F	060819	100	RL1E152MA2FT	060819T	180
1800	2200	0.028	0.056	5	12.5 x 35.0	RL1E182MTE	060072	50	-	-	-
1800	2070	0.028	0.056	7.5	16.0 x 25.0	RL1E182MPF	060820	100	RL1E182MPFT	060820T	180
1800	1890	0.036	0.072	7.5	18.0 x 20.0	RL1E182MA6F	060821	50	-	-	-
2200	2390	0.024	0.048	5	12.5 x 40.0	RL1E222MZE	060073	50	-	-	-
2700	2350	0.025	0.050	7.5	16.0 x 31.5	RL1E272MRF	060074	50	-	-	-
2700	2180	0.027	0.054	7.5	18.0 x 25.0	RL1E272MA7F	060822	50	-	-	-
3300	2550	0.022	0.044	7.5	16.0 x 35.5	RL1E332MA3F	060075	50	-	-	-
3300	2470	0.023	0.046	7.5	18.0 x 31.5	RL1E332MA8F	060823	50	-	-	-
3900	2900	0.020	0.040	7.5	16.0 x 40.0	RL1E392MA4F	060076	50	-	-	-
3900	2740	0.019	0.038	7.5	18.0 x 35.5	RL1E392MVF	060824	50	-	-	-
4700	3070	0.018	0.036	7.5	18.0 x 40.0	RL1E472MA9F	060077	50	-	-	-
35 Volt											
27	175	0.65	1.30	2(5)	5.0 x 11.5	RL1V270MAB	060080	200	RL1V270MAET	060080T	2000
39	235	0.46	0.92	2.5(5)	6.3 x 11.5	RL1V390MBC	060081	200	RL1V390MBET	060081T	1500
56	290	0.30	0.60	2.5(5)	6.3 x 11.5	RL1V560MBC	060082	200	RL1V560MBET	060082T	1500
82	400	0.20	0.40	3.5(5)	8.0 x 12.0	RL1V820MCD	060083	200	RL1V820MCET	060083T	1000
120	506	0.17	0.34	3.5(5)	8.0 x 12.0	RL1V121MCD	060084	200	RL1V121MCET	060084T	1000
150	635	0.12	0.24	5	10.0 x 12.5	RL1V151MDE	060085	100	RL1V151MDET	060085T	600
180	795	0.13	0.26	3.5(5)	8.0 x 15.0	RL1V181MQD	060086	200	RL1V181MQET	060086T	1000
180	795	0.095	0.19	5	10.0 x 16.0	RL1V181MEE	060828	100	RL1V181MEET	060828T	600
220	760	0.095	0.19	3.5(5)	8.0 x 20.0	RL1V221MSD	060133	200	RL1V221MSET	060133T	1000



NOVER type RL (continued)

Value (μF)	Ripple Current (mA)	Impedance (Ω)		Dimensions (mm)		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs	
		20°C	-10°C	Pitch	Dia. x L	Novor Part No.	Anglia Order Code		Novor Part No.	Anglia Order Code		
35 Volt (continued)												
330	1010	0.065	0.13	5	10.0 x 20.0	RL1V331MFE	060088	100	RL1V331MFET	060088T	600	
330	1010	0.065	0.13	5	12.5 x 15.0	RL1V331MWE	060829	100	RL1V331MWET	060829T	400	
390	1190	0.055	0.11	5	10.0 x 25.0	RL1V391MYE	060089	100	RL1V391MYET	060089T	600	
560	1450	0.045	0.090	5	10.0 x 30.0	RL1V561MUE	060090	100	-	-	-	
560	1400	0.042	0.084	5	12.5 x 20.0	RL1V561MGE	060830	100	RL1V561MGET	060830T	400	
560	1360	0.046	0.092	7.5	16.0 x 15.0	RL1V561MA1F	060831	100	RL1V561MA1FT	060831T	180	
680	1690	0.038	0.076	5	12.5 x 25.0	RL1V681MHE	060091	100	RL1V681MHET	060091T	400	
680	1520	0.043	0.086	7.5	18.0 x 15.0	RL1V681MA5F	060832	50	-	-	-	
1000	1950	0.032	0.064	5	12.5 x 30.0	RL1V102MXE	060093	100	-	-	-	
1000	1730	0.034	0.068	7.5	16.0 x 20.0	RL1V102MA2F	060833	100	RL1V102MA2FT	060833T	180	
1200	2200	0.028	0.056	5	12.5 x 35.0	RL1V122MTE	060094	50	-	-	-	
1200	2070	0.028	0.056	7.5	16.0 x 25.0	RL1V122MPF	060834	100	RL1V122MPFT	060834T	180	
1200	1900	0.036	0.072	7.5	18.0 x 20.0	RL1V122MA6F	060835	50	-	-	-	
1500	2390	0.026	0.052	5	12.5 x 40.0	RL1V152MZE	060095	50	-	-	-	
1800	2350	0.025	0.050	7.5	16.0 x 31.5	RL1V182MRF	060096	50	-	-	-	
1800	2200	0.027	0.054	7.5	18.0 x 25.0	RL1V182MA7F	060836	50	-	-	-	
2200	2550	0.022	0.044	7.5	16.0 x 35.5	RL1V222MA3F	060098	50	-	-	-	
2200	2490	0.023	0.046	7.5	18.0 x 31.5	RL1V222MA8F	060837	50	-	-	-	
2700	2900	0.020	0.040	7.5	16.0 x 40.0	RL1V272MA4F	060099	50	-	-	-	
2700	2770	0.019	0.038	7.5	18.0 x 35.5	RL1V272MVF	060838	50	-	-	-	
3300	3110	0.018	0.036	7.5	18.0 x 40.0	RL1V332MA9F	060100	50	-	-	-	
50 Volt												
0.47	22	3.9	7.8	2(5)	5.0 x 11.5	RL1HR47MAB	060105	200	RL1HR47MAET	060105T	2000	
1.0	36	3.5	7.0	2(5)	5.0 x 11.5	RL1H010MAB	060106	200	RL1H010MAET	060106T	2000	
2.2	54	3.0	6.0	2(5)	5.0 x 11.5	RL1H2R2MAB	060107	200	RL1H2R2MAET	060107T	2000	
3.3	63	2.6	5.2	2(5)	5.0 x 11.5	RL1H3R3MAB	060108	200	RL1H3R3MAET	060108T	2000	
4.7	75	2.2	4.4	2(5)	5.0 x 11.5	RL1H4R7MAB	060109	200	RL1H4R7MAET	060109T	2000	
10	110	1.4	2.8	2(5)	5.0 x 11.5	RL1H100MAB	060110	200	RL1H100MAET	060110T	2000	
18	120	0.95	1.9	2(5)	5.0 x 11.5	RL1H180MAB	060111	200	RL1H180MAET	060111T	2000	
27	135	0.55	1.1	2.5(5)	6.3 x 11.5	RL1H270MBC	060112	200	RL1H270MBET	060112T	1500	
39	148	0.36	0.72	2.5(5)	6.3 x 11.5	RL1H390MBC	060113	200	RL1H390MBET	060113T	1500	
56	153	0.28	0.56	2.5(5)	6.3 x 11.5	RL1H560MBC	060114	200	RL1H560MBET	060114T	1500	
68	360	0.20	0.40	3.5(5)	8.0 x 12.0	RL1H680MCD	060115	200	RL1H680MCET	060115T	1000	
82	460	0.18	0.36	3.5(5)	8.0 x 15.0	RL1H820MQD	060116	200	RL1H820MQET	060116T	1000	
82	443	0.18	0.36	5	10.0 x 12.5	RL1H820MDE	060842	100	RL1H820MDET	060842T	600	
100	553	0.15	0.30	5	10.0 x 16.0	RL1H101MEE	060117	100	RL1H101MEET	060117T	600	
120	670	0.13	0.26	3.5(5)	8.0 x 20.0	RL1H121MSD	060118	200	RL1H121MSET	060118T	1000	
180	676	0.085	0.17	5	10.0 x 20.0	RL1H181MFE	060119	100	RL1H181MFET	060119T	600	
180	745	0.095	0.19	5	12.5 x 15.0	RL1H181MWE	060843	100	RL1H181MWET	060843T	400	
220	876	0.075	0.17	5	10.0 x 20.0	RL1H221MFE	060120	100	RL1H221MFET	060120T	600	
330	982	0.065	0.13	7.5	16.0 x 15.0	RL1H331MA1F	060121	100	RL1H331MA1FT	060121T	600	
330	1010	0.055	0.11	5	10.0 x 30.0	RL1H331MUE	060844	100	-	-	-	
330	979	0.060	0.12	5	12.5 x 20.0	RL1H331MGE	060845	100	RL1H331MGET	060845T	400	
470	1180	0.044	0.088	5	12.5 x 25.0	RL1H471MHE	060122	100	RL1H471MHET	060122T	400	
470	1080	0.048	0.096	7.5	18.0 x 15.0	RL1H471MA5F	060846	50	-	-	-	
560	1310	0.040	0.080	5	12.5 x 30.0	RL1H561MXE	060123	100	-	-	-	
680	1470	0.036	0.072	5	12.5 x 35.0	RL1H681MTE	060124	50	-	-	-	
680	1210	0.045	0.090	7.5	16.0 x 20.0	RL1H681MA2F	060847	100	RL1H681MA2FT	060847T	180	
820	1590	0.034	0.068	5	12.5 x 40.0	RL1H821MZE	060125	50	-	-	-	
820	1490	0.038	0.076	7.5	16.0 x 25.0	RL1H821MPF	060848	100	RL1H821MPFT	060848T	180	
820	1450	0.036	0.064	7.5	18.0 x 20.0	RL1H821MA6F	060849	50	-	-	-	
1000	1890	0.032	0.064	7.5	16.0 x 31.5	RL1H102MRF	060126	50	RL1H102MRFT	060126T	180	
1000	1720	0.032	0.064	7.5	18.0 x 25.0	RL1H102MA7F	060850	50	-	-	-	
1200	2140	0.028	0.056	7.5	16.0 x 35.5	RL1H122MA3F	060127	50	-	-	-	
1500	2410	0.026	0.052	7.5	16.0 x 40.0	RL1H152MA4F	060128	50	-	-	-	
1500	1970	0.026	0.052	7.5	18.0 x 31.5	RL1H152MA8F	060851	50	-	-	-	
1800	2310	0.025	0.050	7.5	18.0 x 31.5	RL1H182MA8F	060129	50	-	-	-	
2200	2530	0.024	0.048	7.5	18.0 x 40.0	RL1H222MA9F	060130	50	-	-	-	
63 Volt												
12	120	1.20	3.6	2(5)	5.0 x 11.5	RL1J120MAB	060146	200	RL1J120MAET	060146T	2000	
18	135	0.85	2.6	2(5)	5.0 x 11.5	RL1J180MAB	060147	200	RL1J180MAET	060147T	2000	
27	148	0.55	1.7	2.5(5)	6.3 x 11.5	RL1J270MBC	060148	200	RL1J270MBET	060148T	1500	
39	153	0.38	1.1	3.5(5)	8.0 x 12.0	RL1J390MCD	060149	200	RL1J390MCET	060149T	1000	
47	360	0.32	0.96	3.5(5)	8.0 x 12.0	RL1J470MCD	060150	200	RL1J470MCET	060150T	1000	
56	448	0.23	0.69	5	10.0 x 12.5	RL1J560MDE	060151	100	RL1J560MDET	060151T	600	
68	469	0.24	0.72	3.5(5)	8.0 x 12.0	RL1J680MCD	060152	200	RL1J680MCET	060152T	1000	
68	553	0.17	0.51	5	10.0 x 16.0	RL1J680MEE	060860	100	RL1J680MEET	060860T	600	
82	682	0.17	0.51	3.5(5)	8.0 x 20.0	RL1J820MSD	060153	200	RL1J820MSET	060153T	1000	
120	676	0.12	0.36	5	10.0 x 20.0	RL1J121MFE	060154	100	RL1J121MFET	060154T	600	
150	745	0.11	0.33	5	12.5 x 15.0	RL1J151MWE	060155	100	RL1J151MWET	060155T	400	
150	876	0.10	0.30	5	10.0 x 25.0	RL1J151MYE	060861	100	RL1J151MYET	060861T	600	

(5) Leads pre-formed to 5mm pitch on taped part

RL continued overleaf > > >



NOVER type RL (continued)

Value (μ F)	Ripple Current (mA)	Impedance (Ω)		Dimensions (mm)		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs	
		20°C	-10°C	Pitch	Dia. x L	Nover Part No.	Anglia Order Code		Nover Part No.	Anglia Order Code		
63 Volt (continued)												
180	1020	0.085	0.26	5	10.0 x 30.0	RL1J181MUE	060156	100	-	-	-	
220	979	0.075	0.23	5	12.5 x 20.0	RL1J221MGE	060157	100	RL1J221MGET	060157T	400	
220	982	0.080	0.24	7.5	16.0 x 15.0	RL1J221MA1F	060862	100	RL1J221MA1FT	060862T	180	
270	1180	0.065	0.20	5	12.5 x 20.0	RL1J271MGE	060158	100	RL1J271MGET	060158T	400	
330	1200	0.065	0.20	7.5	18.0 x 15.0	RL1J331MA5F	060159	50	-	-	-	
390	1310	0.055	0.17	5	12.5 x 30.0	RL1J391MXE	060160	100	-	-	-	
390	1210	0.057	0.17	7.5	16.0 x 20.0	RL1J391MA2F	060863	100	RL1J391MA2FT	060863T	180	
470	1470	0.048	0.14	5	12.5 x 35.0	RL1J471MTE	060142	50	-	-	-	
470	1460	0.058	0.17	7.5	18.0 x 20.0	RL1J471MA6F	060161	50	-	-	-	
470	1490	0.052	0.16	7.5	16.0 x 25.0	RL1J471MPF	060864	100	RL1J471MPFT	060864T	180	
560	1590	0.042	0.13	5	12.5 x 40.0	RL1J561MZE	060162	50	-	-	-	
680	1890	0.042	0.13	7.5	16.0 x 31.5	RL1J681MRF	060163	50	-	-	-	
680	1740	0.050	0.15	7.5	18.0 x 25.0	RL1J681MA7F	060865	50	-	-	-	
820	2140	0.036	0.11	7.5	16.0 x 35.5	RL1J821MA3F	060164	50	-	-	-	
820	1990	0.042	0.13	7.5	18.0 x 31.5	RL1J821MA8F	060866	50	-	-	-	
1000	2410	0.032	0.096	7.5	16.0 x 40.0	RL1J102MA4F	060165	50	-	-	-	
1000	2340	0.035	0.110	7.5	18.0 x 31.5	RL1J102MA8F	060867	50	-	-	-	
1200	2560	0.032	0.096	7.5	18.0 x 40.0	RL1J122MA9F	060166	50	-	-	-	
100 Volt												
5.6	57	1.9	7.6	2(5)	5.0 x 11.5	RL2A5R6MAB	060171	200	RL2A5R6MAET	060171T	2000	
8.2	74	1.3	5.2	2.5(5)	6.3 x 11.5	RL2A8R2MBC	060172	200	RL2A8R2MBET	060172T	1500	
12	78	1.1	4.4	2.5(5)	6.3 x 11.5	RL2A120MBC	060173	200	RL2A120MBET	060173T	1500	
18	85	0.62	2.5	3.5(5)	8.0 x 12.0	RL2A180MCD	060174	200	RL2A180MCET	060174T	1000	
22	275	0.53	2.1	3.5(5)	8.0 x 12.0	RL2A220MCD	060175	200	RL2A220MCET	060175T	1000	
27	319	0.47	1.9	5	10.0 x 12.5	RL2A270MDE	060176	100	RL2A270MDET	060176T	600	
33	360	0.35	1.4	3.5(5)	8.0 x 15.0	RL2A330MQD	060177	200	RL2A330MQET	060177T	1000	
33	424	0.32	1.3	5	10.0 x 16.0	RL2A330MEE	060871	100	RL2A330MEET	060871T	600	
39	490	0.27	1.1	3.5(5)	8.0 x 20.0	RL2A390MSD	060178	200	RL2A390MSET	060178T	1000	
56	499	0.25	1.0	5	10.0 x 20.0	RL2A560MFE	060277	100	RL2A560MFET	060277T	600	
68	634	0.18	0.72	5	10.0 x 25.0	RL2A680MYE	060278	100	RL2A680MYET	060278T	600	
68	613	0.20	0.80	5	12.5 x 15.0	RL2A680MWE	060872	100	RL2A680MWET	060872T	400	
100	739	0.15	0.60	5	10.0 x 30.0	RL2A101MUE	060179	100	-	-	-	
100	805	0.13	0.52	5	12.5 x 20.0	RL2A101MGE	060873	100	RL2A101MGET	060873T	400	
120	857	0.11	0.44	5	12.5 x 25.0	RL2A121MHE	060180	100	RL2A121MHET	060180T	400	
120	706	0.13	0.52	7.5	16.0 x 15.0	RL2A121MA1F	060874	100	RL2A121MA1FT	060874T	180	
150	871	0.12	0.48	7.5	18.0 x 15.0	RL2A151MA5F	060181	50	-	-	-	
180	1120	0.090	0.36	5	12.5 x 30.0	RL2A181MXE	060182	100	-	-	-	
180	916	0.110	0.44	7.5	16.0 x 20.0	RL2A181MA2F	060875	100	RL2A181MA2FT	060875T	180	
220	1240	0.075	0.30	5	12.5 x 35.0	RL2A221MTE	060183	50	-	-	-	
220	1290	0.081	0.32	7.5	16.0 x 25.0	RL2A221MPF	060876	100	RL2A221MPFT	060876T	180	
270	1330	0.060	0.24	5	12.5 x 40.0	RL2A271MZE	060184	50	-	-	-	
270	1170	0.085	0.34	7.5	18.0 x 20.0	RL2A271MA6F	060877	50	-	-	-	
330	1630	0.059	0.23	7.5	16.0 x 31.5	RL2A331MRF	060185	50	-	-	-	
330	1500	0.071	0.28	7.5	18.0 x 25.0	RL2A331MA7F	060878	50	-	-	-	
390	1750	0.052	0.21	7.5	16.0 x 35.5	RL2A391MA3F	060186	50	-	-	-	
390	1630	0.058	0.23	7.5	18.0 x 31.5	RL2A391MA8F	060879	50	-	-	-	
470	1920	0.045	0.18	7.5	16.0 x 40.0	RL2A471MA4F	060187	50	-	-	-	
560	1920	0.054	0.22	7.5	18.0 x 35.5	RL2A561MVF	060880	50	-	-	-	
680	2100	0.041	0.16	7.5	18.0 x 40.0	RL2A681MA9F	060188	50	-	-	-	

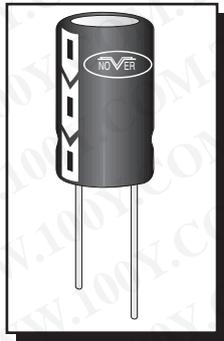
(5) Leads pre-formed to 5mm pitch on taped part

PART NUMBER KEY
Refer to page 4

ORDERING INFORMATION										
For simplicity, this list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.	Example : 270μF 16V <table border="0"> <tr> <td></td> <td>Basic Anglia Code</td> <td>Nover Letter</td> </tr> <tr> <td>Cropped</td> <td>0 6 0 0 3 4</td> <td>C</td> </tr> <tr> <td>Twisted & formed</td> <td>0 6 0 0 3 4</td> <td>W</td> </tr> </table>		Basic Anglia Code	Nover Letter	Cropped	0 6 0 0 3 4	C	Twisted & formed	0 6 0 0 3 4	W
	Basic Anglia Code	Nover Letter								
Cropped	0 6 0 0 3 4	C								
Twisted & formed	0 6 0 0 3 4	W								

NOVER type RX

A specialised range of radial aluminium electrolytic capacitors derived from the high specification RL series. The RX offers a superb combination of low impedance, high temperature and an extended life expectancy, making it especially suitable for applications where long term component reliability and integrity are of paramount importance. The entire range of available values and voltages in loose or taped formats, are shown on the following pages. For lead forming, cropping and taping options refer to page 5.



- High endurance **Up to 6000 hours**
- **Low impedance**
- High ripple current
- Maximum temperature **105°C**
- Capacitance tolerance **20%**
- Body colour **Black**
- Supplied loose or taped

Specification

Conforms to JIS C5141-1982 Char.W
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 100kHz, 105°C
 (see also Multiplier table below)
 Impedance (as listed) measured at 100kHz, 20°C
 Operating temperature range -55°C to +105°C
 Leakage current ≤0.01CV or 0.3µA
 (whichever is greater) after 2 min.

Endurance at 105°C

Diameter	≤8mm	≥10mm
Endurance	3000 hours	6000 hours

Dissipation factor (120Hz, 20°C)

* Add 0.02 for every 100µF above 1000µF

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Tan δ (max) *	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	

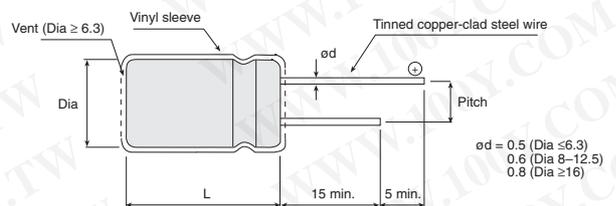
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	79V	125V	d.c.

Multiplier for ripple current

Frequency coefficient					
	Freq(Hz)				
	50/60	120	1K	10K	≤100K
Cap (µF)					
0.47 ~ 4.7	0.35	0.42	0.60	0.80	1.0
10 ~ 33	0.45	0.55	0.75	0.90	1.0
47 ~ 330	0.60	0.70	0.85	0.95	1.0
470 ~ 1000	0.65	0.75	0.90	0.98	1.0
2200 ~ 10000	0.75	0.80	0.95	1.0	1.0
Temperature coefficient					
Temperature (°C)	+70		+85		+105
Coefficient	1.96		1.68		1.0

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L≥20)

◆ **LEAD FORMING** ◆
 ◆ **CROPPING** ◆
 ◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 100µF 16V	
	Nover Letter
Cropped	Basic Anglia Code 0 6 1 0 8 5 C
Twisted & formed	0 6 1 0 8 5 W

RX continued overleaf > > >

NOVER type RX

Value (μ F)	Ripple Current (mA)	Impedance (Ω)	Dimensions (mm) Pitch Dia. x L		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs
					Nover Part No.	Anglia Order Code		Nover Part No.	Anglia Order Code	
6.3 Volt										
100	147	0.9	2(5)	5.0 x 11.0	RX0J101MAB	061001	200	RX0J101MAET	061001T	2000
220	244	0.4	2.5(5)	6.3 x 11.0	RX0J221MBC	061002	200	RX0J221MBET	061002T	1500
330	244	0.4	2.5(5)	6.3 x 11.0	RX0J331MBC	061003	200	RX0J331MBET	061003T	1500
470	391	0.250	3.5(5)	8.0 x 11.5	RX0J471MCD	061004	200	RX0J471MCET	061004T	1000
1000	576	0.160	5	10.0 x 12.5	RX0J102MDE	061005	100	RX0J102MDET	061005T	600
2200	1296	0.052	5	12.5 x 20.0	RX0J222MGE	061006	100	RX0J222MGET	061006T	400
3300	1296	0.052	5	12.5 x 20.0	RX0J332MGE	061007	100	RX0J332MGET	061007T	400
4700	1839	0.034	7.5	16.0 x 25.0	RX0J472MPF	061008	100	RX0J472MPFT	061008T	180
6800	1839	0.034	7.5	16.0 x 25.0	RX0J682MPF	061009	100	RX0J682MPFT	061009T	180
10000	1994	0.029	7.5	16.0 x 31.5	RX0J103MRF	061010	50	-	-	-
10 Volt										
100	147	0.9	2(5)	5.0 x 11.0	RX1A101MAB	061011	200	RX1A101MAET	061011T	2000
220	244	0.4	2.5(5)	6.3 x 11.0	RX1A221MBC	061012	200	RX1A221MBET	061012T	1500
330	391	0.25	3.5(5)	8.0 x 11.5	RX1A331MCD	061013	200	RX1A331MCET	061013T	1000
470	391	0.25	3.5(5)	8.0 x 11.5	RX1A471MCD	061014	200	RX1A471MCET	061014T	1000
1000	762	0.12	5	10.0 x 16.0	RX1A102MEE	061015	100	RX1A102MEET	061015T	600
2200	1296	0.062	5	12.5 x 20.0	RX1A222MGE	061016	100	RX1A222MGET	061016T	400
3300	1646	0.048	5	12.5 x 25.0	RX1A332MHE	061017	100	RX1A332MHET	061017T	400
4700	1839	0.034	7.5	16.0 x 25.0	RX1A472MPF	061018	100	RX1A472MPFT	061018T	180
6800	1994	0.029	7.5	16.0 x 31.5	RX1A682MRF	061019	50	-	-	-
10000	2193	0.025	7.5	18.0 x 35.5	RX1A103MVF	061020	50	-	-	-
16 Volt										
47	147	0.9	2(5)	5.0 x 11.0	RX1C470MAB	061084	200	RX1C470MAET	061084T	2000
100	244	0.4	2.5(5)	6.3 x 11.0	RX1C101MBC	061085	200	RX1C101MBET	061085T	1500
220	391	0.25	3.5(5)	8.0 x 11.5	RX1C221MCD	061086	200	RX1C221MCET	061086T	1000
330	391	0.25	3.5(5)	8.0 x 11.5	RX1C331MCD	061087	200	RX1C331MCET	061087T	1000
470	576	0.16	5	10.0 x 12.5	RX1C471MDE	061088	100	RX1C471MDET	061088T	600
1000	1009	0.078	5	10.0 x 20.0	RX1C102MFE	061089	100	RX1C102MFET	061089T	600
2200	1646	0.048	5	12.5 x 25.0	RX1C222MHE	061090	100	RX1C222MHET	061090T	400
3300	1839	0.034	7.5	16.0 x 25.0	RX1C332MPF	061091	100	RX1C332MPFT	061091T	180
4700	1994	0.029	7.5	16.0 x 31.5	RX1C472MRF	061092	50	-	-	-
6800	2193	0.025	7.5	18.0 x 35.5	RX1C682MVF	061093	50	-	-	-
25 Volt										
33	147	0.9	2(5)	5.0 x 11.0	RX1E330MAB	061028	200	RX1E330MAET	061028T	2000
47	147	0.9	2(5)	5.0 x 11.0	RX1E470MAB	061029	200	RX1E470MAET	061029T	2000
100	244	0.4	2.5(5)	6.3 x 11.0	RX1E101MBC	061030	200	RX1E101MBET	061030T	1500
220	391	0.25	3.5(5)	8.0 x 11.5	RX1E221MCD	061031	200	RX1E221MCET	061031T	1000
330	576	0.16	5	10.0 x 12.5	RX1E331MDE	061032	100	RX1E331MDET	061032T	600
470	762	0.12	5	10.0 x 16.0	RX1E471MEE	061033	100	RX1E471MEET	061033T	600
1000	1296	0.062	5	12.5 x 20.0	RX1E102MGE	061034	100	RX1E102MGET	061034T	400
2200	1893	0.034	7.5	16.0 x 25.0	RX1E222MPF	061035	100	RX1E222MPFT	061035T	180
3300	1994	0.029	7.5	16.0 x 31.5	RX1E332MRF	061036	50	-	-	-
4700	2193	0.025	7.5	18.0 x 35.5	RX1E472MVF	061037	50	-	-	-
35 Volt										
33	147	0.90	2(5)	5.0 x 11.0	RX1V330MAB	061039	200	RX1V330MAET	061039T	2000
47	244	0.40	2.5(5)	6.3 x 11.0	RX1V470MBC	061040	200	RX1V470MBET	061040T	1500
100	391	0.25	3.5(5)	8.0 x 11.5	RX1V101MCD	061041	200	RX1V101MCET	061041T	1000
220	576	0.16	5	10.0 x 12.5	RX1V221MDE	061042	100	RX1V221MDET	061042T	600
330	762	0.12	5	10.0 x 16.0	RX1V331MEE	061043	100	RX1V331MEET	061043T	600
470	1009	0.078	5	10.0 x 20.0	RX1V471MFE	061044	100	RX1V471MFET	061044T	600
1000	1646	0.048	5	12.5 x 25.0	RX1V102MHE	061045	100	RX1V102MHET	061045T	400
2200	1994	0.029	7.5	16.0 x 31.5	RX1V222MRF	061046	50	-	-	-
3300	2193	0.025	7.5	18.0 x 35.5	RX1V332MVF	061047	50	-	-	-
50 Volt										
0.47	17	5.50	2(5)	5.0 x 11.0	RX1HR47MAB	061048	200	RX1HR47MAET	061048T	2000
1.0	29	4.00	2(5)	5.0 x 11.0	RX1H010MAB	061049	200	RX1H010MAET	061049T	2000
2.2	43	2.50	2(5)	5.0 x 11.0	RX1H2R2MAB	061050	200	RX1H2R2MAET	061050T	2000
3.3	53	2.20	2(5)	5.0 x 11.0	RX1H3R3MAB	061051	200	RX1H3R3MAET	061051T	2000
4.7	88	1.90	2(5)	5.0 x 11.0	RX1H4R7MAB	061052	200	RX1H4R7MAET	061052T	2000
10	100	1.50	2(5)	5.0 x 11.0	RX1H100MAB	061053	200	RX1H100MAET	061053T	2000
22	147	0.90	2(5)	5.0 x 11.0	RX1H220MAB	061054	200	RX1H220MAET	061054T	2000
33	244	0.40	2.5(5)	6.3 x 11.0	RX1H330MBC	061055	200	RX1H330MBET	061055T	1500
47	244	0.40	2.5(5)	6.3 x 11.0	RX1H470MBC	061056	200	RX1H470MBET	061056T	1500
100	391	0.25	3.5(5)	8.0 x 11.5	RX1H101MCD	061057	200	RX1H101MCET	061057T	1000
220	762	0.12	5	10.0 x 16.0	RX1H221MEE	061058	100	RX1H221MEET	061058T	600
330	1009	0.078	5	10.0 x 20.0	RX1H331MFE	061059	100	RX1H331MFET	061059T	600
470	1295	0.062	5	12.5 x 20.0	RX1H471MGE	061060	100	RX1H471MGET	061060T	400
1000	1839	0.034	7.5	16.0 x 25.0	RX1H102MPF	061061	100	RX1H102MPFT	061061T	180
2200	2193	0.025	7.5	18.0 x 35.5	RX1H222MVF	061062	50	-	-	-



NOVER type RX (continued)

Value (µF)	Ripple Current (mA)	Impedance (Ω)	Dimensions (mm) Pitch Dia. x L		LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs
					Nover Part No.	Anglia Order Code		Nover Part No.	Anglia Order Code	
63 Volt										
10	87	2.30	2(5)	5.0 x 11.0	RX1J100MAB	061063	200	RX1J100MAET	061063T	2000
22	138	1.30	2.5(5)	6.3 x 11.0	RX1J220MBC	061064	200	RX1J220MBET	061064T	1500
33	138	1.20	2.5(5)	6.3 x 11.0	RX1J330MBC	061065	200	RX1J330MBET	061065T	1500
47	210	0.63	3.5(5)	8.0 x 11.5	RX1J470MCD	061066	200	RX1J470MCET	061066T	1000
100	300	0.43	5	10.0 x 12.5	RX1J101MDE	061067	100	RX1J101MDET	061067T	600
220	520	0.21	5	10.0 x 20.0	RX1J221MFE	061068	100	RX1J221MFET	061068T	600
330	660	0.16	5	12.5 x 20.0	RX1J331MGE	061069	100	RX1J331MGET	061069T	400
470	750	0.12	5	12.5 x 25.0	RX1J471MHE	061070	100	RX1J471MHET	061070T	400
1000	1390	0.054	7.5	16.0 x 31.5	RX1J102MRF	061071	50	-	-	-
100 Volt										
0.47	15	6.0	2(5)	5.0 x 11.0	RX2AR47MAB	061072	200	RX2AR47MAET	061072T	2000
1.0	20	4.5	2(5)	5.0 x 11.0	RX2A010MAB	061073	200	RX2A010MAET	061073T	2000
2.2	30	3.0	2(5)	5.0 x 11.0	RX2A2R2MAB	061074	200	RX2A2R2MAET	061074T	2000
3.3	40	2.7	2(5)	5.0 x 11.0	RX2A3R3MAB	061075	200	RX2A3R3MAET	061075T	2000
4.7	65	2.5	2(5)	5.0 x 11.0	RX2A4R7MAB	061076	200	RX2A4R7MAET	061076T	2000
10	138	1.2	2.5(5)	6.3 x 11.0	RX2A100MBC	061077	200	RX2A100MBET	061077T	1500
22	160	0.63	3.5(5)	8.0 x 11.5	RX2A220MCD	061078	200	RX2A220MCET	061078T	1000
33	230	0.43	5	10.0 x 12.5	RX2A330MDE	061079	100	RX2A330MDET	061079T	600
47	290	0.31	5	10.0 x 16.0	RX2A470MEE	061080	100	RX2A470MEET	061080T	600
100	430	0.16	5	12.5 x 20.0	RX2A101MGE	061081	100	RX2A101MGET	061081T	400
220	900	0.073	7.5	16.0 x 25.0	RX2A221MPF	061082	100	RX2A221MPFT	061082T	180
330	900	0.073	7.5	16.0 x 25.0	RX2A331MPF	061083	100	RX2A331MPFT	061083T	180

(5) Leads pre-formed to 5mm pitch on taped part

PART NUMBER KEY
Refer to page 4

ORDERING INFORMATION

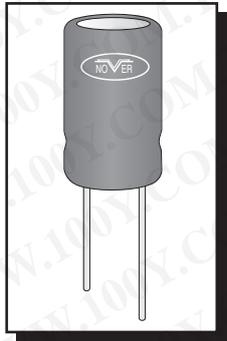
For simplicity, this list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : **100µF 16V**

	Basic Anglia Code	Nover Letter
Cropped	0 6 1 0 8 5	C
Twisted & formed	0 6 1 0 8 5	W

NOVER type RB

A range of bi-polar (non-polarised) radial aluminium electrolytic capacitors suitable for applications where reverse voltage may be applied. Typical applications may be in the automotive, motor control or audio industries. The entire range of available values and voltages in loose or taped formats, are shown on the following pages. For lead forming, cropping and taping options refer to page 5.



- **Bi-polar (non-polarised)**
- Endurance **2000 hours at 85°C**
- Solvent resistant
- Capacitance tolerance **20%**
- Body colour **Red**
- Supplied loose or taped

Specification

Conforms to EIAJ RC-3803
 Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.03CV + 3µA after 5 min.

Dissipation factor (120Hz, 20°C)

* Add 0.02 for every 1000µF above 1000µF

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Tan δ (max)*	0.24	0.24	0.20	0.20	0.16	0.14	0.12	0.10	

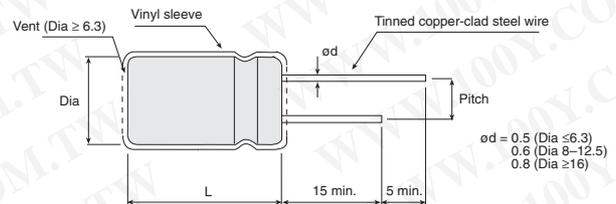
Surge voltage capability

Rated voltage	6.3V	10V	16V	25V	35V	50V	63V	100V	d.c.
Surge voltage	8V	13V	20V	32V	44V	63V	79V	125V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)				
		50/60	120	1K	10K	100K
Rated Voltage (V)	6.3 ~ 16	0.8	1.0	1.1	1.2	1.2
	25 ~ 35	0.8	1.0	1.5	1.7	1.7
	50 ~ 100	0.8	1.0	1.6	1.9	1.9
Temperature coefficient						
Temperature (°C)	+70		+85			
Factor	1.35		1.0			

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.0 to L (2.0 L ≥ 20)

◆ **LEAD FORMING** ◆
 ◆ **CROPPING** ◆
 ◆ **TAPING** ◆

Refer to page 5

ORDERING INFORMATION

For simplicity, the following list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 10µF 50V	Basic Anglia Code	Nover Letter
Cropped	0 5 0 0 5 4	C
Twisted & formed	0 5 0 0 5 4	W



NOVER type RB

Value (µF)	Ripple Current (mA)	Dimensions (mm)		Nover Part No.	LOOSE		TAPED & BOXED		Box Qty pcs	
		Pitch	Dia. x L		Anglia Order Code	Pack Qty pcs	Nover Part No.	Anglia Order Code		
6.3 Volt										
33	58	2(5)	5.0 x 11.0	RB0J330MAB	050303	200	RB0J330MAET	050303T	2000	
47	69	2(5)	5.0 x 11.0	RB0J470MAB	050304	200	RB0J470MAET	050304T	2000	
100	115	2.5(5)	6.3 x 11.0	RB0J101MBC	050305	200	RB0J101MBET	050305T	1500	
220	202	3.5(5)	8.0 x 11.5	RB0J221MCD	050306	200	RB0J221MCET	050306T	1000	
330	247	3.5(5)	8.0 x 11.5	RB0J331MCD	050307	200	RB0J331MCET	050307T	1000	
470	350	5	10.0 x 12.5	RB0J471MDE	050308	100	RB0J471MDET	050308T	600	
1000	611	5	10.0 x 16.0	RB0J102MEE	050301	100	RB0J102MEET	050301T	600	
2200	1090	5	12.5 x 25.0	RB0J222MHE	050310	100	RB0J222MHET	050310T	400	
3300	1490	7.5	16.0 x 25.0	RB0J332MPF	050311	100	RB0J332MPFT	050311T	180	
4700	1880	7.5	16.0 x 31.5	RB0J472MRF	050312	50	-	-	-	
10 Volt										
22	52	2(5)	5.0 x 11.0	RB1A220MAB	050001	200	RB1A220MAET	050001T	2000	
33	63	2(5)	5.0 x 11.0	RB1A330MAB	050002	200	RB1A330MAET	050002T	2000	
47	75	2(5)	5.0 x 11.0	RB1A470MAB	050003	200	RB1A470MAET	050003T	2000	
100	126	2.5(5)	6.3 x 11.0	RB1A101MBC	050004	200	RB1A101MBET	050004T	1500	
220	221	3.5(5)	8.0 x 11.5	RB1A221MCD	050005	200	RB1A221MCET	050005T	1000	
330	322	5	10.0 x 12.5	RB1A331MDE	050006	100	RB1A331MDET	050006T	600	
470	420	5	10.0 x 16.0	RB1A471MEE	050007	100	RB1A471MEET	050007T	600	
1000	767	5	12.5 x 20.0	RB1A102MGE	050008	100	RB1A102MGET	050008T	400	
2200	1380	7.5	16.0 x 25.0	RB1A222MPF	050009	100	RB1A222MPFT	050009T	180	
3300	1760	7.5	16.0 x 31.5	RB1A332MRF	050010	50	-	-	-	
4700	2280	7.5	18.0 x 35.5	RB1A472MVF	050011	50	-	-	-	
16 Volt										
10	39	2(5)	5.0 x 11.0	RB1C100MAB	050013	200	RB1C100MAET	050013T	2000	
22	58	2(5)	5.0 x 11.0	RB1C220MAB	050014	200	RB1C220MAET	050014T	2000	
33	71	2(5)	5.0 x 11.0	RB1C330MAB	050015	200	RB1C330MAET	050015T	2000	
47	97	2.5(5)	6.3 x 11.0	RB1C470MBC	050016	200	RB1C470MBET	050016T	1500	
100	167	3.5(5)	8.0 x 11.5	RB1C101MCD	050017	200	RB1C101MCET	050017T	1000	
220	294	5	10.0 x 12.5	RB1C221MDE	050018	100	RB1C221MDET	050018T	600	
330	394	5	10.0 x 16.0	RB1C331MEE	050019	100	RB1C331MEET	050019T	600	
470	513	5	10.0 x 20.0	RB1C471MFE	050020	100	RB1C471MFET	050020T	600	
1000	935	5	12.5 x 25.0	RB1C102MHE	050021	100	RB1C102MHET	050021T	400	
2200	1660	7.5	16.0 x 31.5	RB1C222MRF	050022	50	-	-	-	
25 Volt										
4.7	28	2(5)	5.0 x 11.0	RB1E4R7MAB	050024	200	RB1E4R7MAET	050024T	2000	
10	40	2(5)	5.0 x 11.0	RB1E100MAB	050025	200	RB1E100MAET	050025T	2000	
22	60	2(5)	5.0 x 11.0	RB1E220MAB	050026	200	RB1E220MAET	050026T	2000	
33	84	2.5(5)	6.3 x 11.0	RB1E330MBC	050027	200	RB1E330MBET	050027T	1500	
47	100	2.5(5)	6.3 x 11.0	RB1E470MBC	050028	200	RB1E470MBET	050028T	1500	
100	204	5	10.0 x 12.5	RB1E101MDE	050029	100	RB1E101MDET	050029T	600	
220	332	5	10.0 x 16.0	RB1E221MEE	050030	100	RB1E221MEET	050030T	600	
330	444	5	10.0 x 20.0	RB1E331MFE	050031	100	RB1E331MFET	050031T	600	
470	607	5	12.5 x 20.0	RB1E471MGE	050032	100	RB1E471MGET	050032T	400	
1000	1120	7.5	16.0 x 25.0	RB1E102MPF	050033	100	RB1E102MPFT	050033T	180	
35 Volt										
4.7	28	2(5)	5.0 x 11.0	RB1V4R7MAB	050035	200	RB1V4R7MAET	050035T	2000	
10	42	2(5)	5.0 x 11.0	RB1V100MAB	050036	200	RB1V100MAET	050036T	2000	
22	71	2.5(5)	6.3 x 11.0	RB1V220MBC	050037	200	RB1V220MBET	050037T	1500	
33	87	2.5(5)	6.3 x 11.0	RB1V330MBC	050038	200	RB1V330MBET	050038T	1500	
47	122	3.5(5)	8.0 x 11.5	RB1V470MCD	050039	200	RB1V470MDET	050039T	1000	
100	212	5	10.0 x 12.5	RB1V101MDE	050040	100	RB1V101MDET	050040T	600	
220	375	5	10.0 x 20.0	RB1V221MFE	050041	100	RB1V221MFET	050041T	600	
330	526	5	12.5 x 20.0	RB1V331MGE	050042	100	RB1V331MGET	050042T	400	
470	685	5	12.5 x 25.0	RB1V471MHE	050043	100	RB1V471MHET	050043T	400	
1000	1270	7.5	16.0 x 31.5	RB1V102MRF	050044	50	-	-	-	

(5) Leads pre-formed to 5mm pitch on taped part

RB continued overleaf > > >



NOVER type RB (continued)

Value (μ F)	Ripple Current (mA)	Dimensions (mm)		Nover Part No.	LOOSE		Pack Qty pcs	TAPED & BOXED		Box Qty pcs
		Pitch	Dia. x L		Anglia Order Code	Nover Part No.		Anglia Order Code		
50 Volt										
0.1	4	2(5)	5.0 x 11.0	RB1HR10MAB	050046	200	RB1HR10MAET	050046T	2000	
0.22	7	2(5)	5.0 x 11.0	RB1HR22MAB	050047	200	RB1HR22MAET	050047T	2000	
0.33	8	2(5)	5.0 x 11.0	RB1HR33MAB	050048	200	RB1HR33MAET	050048T	2000	
0.47	10	2(5)	5.0 x 11.0	RB1HR47MAB	050049	200	RB1HR47MAET	050049T	2000	
1.0	14	2(5)	5.0 x 11.0	RB1H010MAB	050050	200	RB1H010MAET	050050T	2000	
2.2	21	2(5)	5.0 x 11.0	RB1H2R2MAB	050051	200	RB1H2R2MAET	050051T	2000	
3.3	26	2(5)	5.0 x 11.0	RB1H3R3MAB	050052	200	RB1H3R3MAET	050052T	2000	
4.7	31	2(5)	5.0 x 11.0	RB1H4R7MAB	050053	200	RB1H4R7MAET	050053T	2000	
10	45	2(5)	5.0 x 11.0	RB1H100MAB	050054	200	RB1H100MAET	050054T	2000	
22	77	2.5(5)	6.3 x 11.0	RB1H220MBC	050055	200	RB1H220MBET	050055T	1500	
33	111	3.5(5)	8.0 x 11.5	RB1H330MCD	050056	200	RB1H330MCET	050056T	1000	
47	157	5	10.0 x 12.5	RB1H470MDE	050057	100	RB1H470MDET	050057T	500	
100	273	5	10.0 x 20.0	RB1H101MFE	050058	100	RB1H101MFET	050058T	500	
220	506	5	12.5 x 25.0	RB1H221MHE	050059	100	RB1H221MHET	050059T	400	
330	620	5	12.5 x 25.0	RB1H331MHE	050060	100	RB1H331MHET	050060T	400	
470	861	7.5	16.0 x 25.0	RB1H471MPF	050061	100	RB1H471MPFT	050061T	180	
63 Volt										
2.2	23	2(5)	5.0 x 11.0	RB1J2R2MAB	050064	200	RB1J2R2MAET	050064T	2000	
3.3	28	2(5)	5.0 x 11.0	RB1J3R3MAB	050065	200	RB1J3R3MAET	050065T	2000	
4.7	34	2(5)	5.0 x 11.0	RB1J4R7MAB	050066	200	RB1J4R7MAET	050066T	2000	
10	57	2.5(5)	6.3 x 11.0	RB1J100MBC	050067	200	RB1J100MBET	050067T	1500	
22	89	3.5(5)	8.0 x 11.5	RB1J220MCD	050068	200	RB1J220MCET	050068T	1000	
33	144	5	10.0 x 12.5	RB1J330MDE	050069	100	RB1J330MDET	050069T	500	
47	188	5	10.0 x 16.0	RB1J470MEE	050070	100	RB1J470MEET	050070T	500	
100	343	5	12.5 x 20.0	RB1J101MGE	050071	100	RB1J101MGET	050071T	400	
220	645	7.5	16.0 x 25.0	RB1J221MPF	050072	100	RB1J221MPFT	050072T	180	
100 Volt										
0.1	5	2(5)	5.0 x 11.0	RB2AR10MAB	050075	200	RB2AR10MAET	050075T	2000	
0.22	8	2(5)	5.0 x 11.0	RB2AR22MAB	050076	200	RB2AR22MAET	050076T	2000	
0.33	9	2(5)	5.0 x 11.0	RB2AR33MAB	050077	200	RB2AR33MAET	050077T	2000	
0.47	11	2(5)	5.0 x 11.0	RB2AR47MAB	050078	200	RB2AR47MAET	050078T	2000	
1.0	16	2(5)	5.0 x 11.0	RB2A010MAB	050079	200	RB2A010MAET	050079T	2000	
2.2	24	2(5)	5.0 x 11.0	RB2A2R2MAB	050080	200	RB2A2R2MAET	050080T	2000	
3.3	34	2.5(5)	6.3 x 11.0	RB2A3R3MBC	050081	200	RB2A3R3MBET	050081T	1500	
4.7	41	2.5(5)	6.3 x 11.0	RB2A4R7MBC	050082	200	RB2A4R7MBET	050082T	1500	
10	70	3.5(5)	8.0 x 11.5	RB2A100MCD	050083	200	RB2A100MCET	050083T	1000	
22	136	5	10.0 x 16.0	RB2A220MEE	050084	100	RB2A220MEET	050084T	500	
33	181	5	10.0 x 20.0	RB2A330MFE	050085	100	RB2A330MFET	050085T	500	
47	248	5	12.5 x 20.0	RB2A470MGE	050086	100	RB2A470MGET	050086T	400	
100	458	7.5	16.0 x 25.0	RB2A101MPF	050087	100	RB2A101MPFT	050087T	180	
220	837	7.5	18.0 x 35.5	RB2A221MVF	050088	50	-	-	-	

(5) Leads pre-formed to 5mm pitch on taped part

PART NUMBER KEY
 Refer to page 4

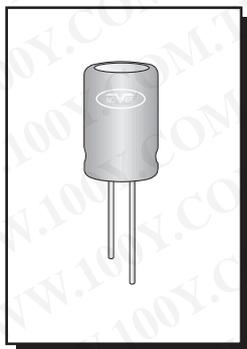
ORDERING INFORMATION

For simplicity, this list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) and taped & boxed parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

	Example : 10μF 50V
	Nover Letter
Cropped	Basic Anglia Code 0 5 0 0 5 4 C
Twisted & formed	0 5 0 0 5 4 W

NOVER type BD

Bi-polar (non-polarised), radial aluminium electrolytic capacitors with a maximum operating temperature capability of 105°C. The temperature range allows the BD series to be utilised in arduous environments such as the automotive industry, whilst the high stability characteristics make it especially suitable for horizontal deflection circuits. The entire range of available values and voltages in loose format, are shown below. For lead forming, cropping and taping options refer to page 5.



- Bi-polar (non polarised)
- High temperature **105°C max.**
- Solvent resistant
- Capacitance tolerance **20%**
- Body colour **Light blue**

Specification

Conforms to JIS C5141-1982 Char.W
 Endurance test 1000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current as listed
 Operating temperature range -55°C to +105°C
 Leakage current 100µA (max.) after 3 minutes

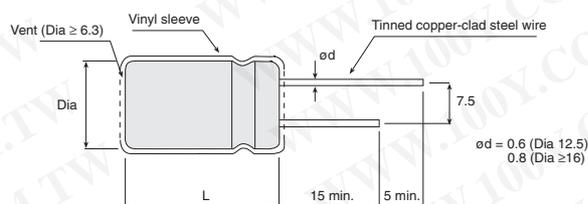
Dissipation factor (120Hz, 20°C)

Rated voltage	50V	d.c.
Tan δ (max)	0.05	

Surge voltage capability

Rated voltage	50V	d.c.
Surge voltage	63V	d.c.

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 2.0 to L

◆ LEAD FORMING ◆
◆ CROPPING ◆
◆ TAPING ◆

Refer to page 5

Value (µF)	Ripple Current (A)*			Dimensions (mm) Pitch	Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs
	105°C	85°C	70°C					
50 Volt								
2.2	3.4	5.8	7.5	7.5	12.5 x 20.0	BD1H2R2MG	050201	100
3.3	4.1	7.0	9.1	7.5	12.5 x 25.0	BD1H3R3MH	050202	100
4.7	4.5	7.8	10.0	7.5	16.0 x 25.0	BD1H4R7MP	050203	100
6.8	4.6	8.0	10.4	7.5	16.0 x 31.5	BD1H6R8MR	050204	100
10	4.9	8.6	11.1	7.5	16.0 x 35.5	BD1H100MA3	050205	50
15	5.4	9.5	12.2	7.5	18.0 x 40.0	BD1H150MA4	050206	50

* Ripple current (Ap-p/15.75kHz)

ORDERING INFORMATION

For simplicity, this list provides both Nover Part No's and Anglia Order Codes for loose (natural pitch, full length leads) parts only. To order alternative lead forms etc just add the appropriate Nover Part No. suffix letter (see page 4) to the basic six digit Anglia Order Code, like example shown.

Example : 10µF 50V	Basic Anglia Code	Nover Letter
Cropped	0 5 0 2 0 5	C
Twisted & formed	0 5 0 2 0 5	W

NOVER type TE

A range of axial lead aluminium electrolytic capacitors designed to be highly cost-effective whilst maintaining high levels of quality and reliability. All voltages and values in loose format are shown on the following page, with taped and reeled versions also available.



- **Standard range**
- **Maximum temperature** **85°C**
- **Capacitance tolerance** **20%**
- **Leakage current** **≤0.01CV**
- **Body colour** **Black**

Specification

Conforms to JIS C5141-1982 Char.W

Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.01CV or 3μA (≤100V)
 (whichever is greater) after 2 mins.
 ≤0.01CV +100μA (>100V) after 5 mins.

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000μF above 1000μF

Rated voltage	10V	16V	25V	40V	63V	100V	250V	350V	450V	d.c.
Tan δ (max)*	0.20	0.16	0.14	0.11	0.10	0.08	0.20	0.20	0.25	

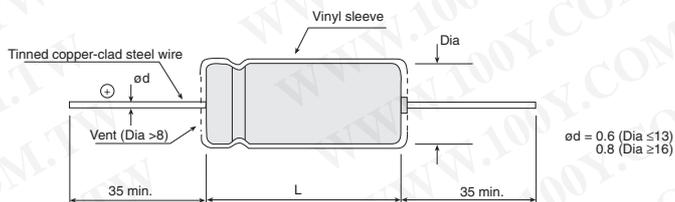
Surge voltage capability

Rated voltage	10V	16V	25V	40V	63V	100V	250V	350V	450V	d.c.
Surge voltage	13V	20V	32V	50V	79V	125V	300V	400V	500V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)		
		50/60	120	1K
Rated Voltage (V)	16 ~ 25	0.85	1.0	1.10
	40 ~ 100	0.80	1.0	1.15
	250	0.75	1.0	1.25
	350 ~ 450	0.70	1.0	1.30

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 0.5 to Dia and 1.5 to L

◆ TAPED AND REELED ◆
 Also available



GENERAL PURPOSE

AXIAL

NOVER type TE

Value (μ F)	Ripple Current (mA)	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs
10 Volt					
47	75	5.0 x 12.5	TE1A470MA	051006	500
100	180	6.3 x 12.5	TE1A101MB	051007	500
220	204	6.3 x 16.0	TE1A221MC	051008	400
470	400	8.0 x 20.0	TE1A471MF	051010	200
1000	585	10.0 x 20.0	TE1A102MG	051011	100
2200	920	13.0 x 25.0	TE1A222ML	051012	100
4700	1200	16.0 x 30.0	TE1A472MN	051014	50
16 Volt					
10	40	5.0 x 12.5	TE1C100MA	051016	500
22	64	5.0 x 12.5	TE1C220MA	051017	500
47	92	6.3 x 12.5	TE1C470MB	051019	500
100	160	6.3 x 12.5	TE1C101MB	051020	500
220	280	8.0 x 16.0	TE1C221MD	051021	300
470	450	8.0 x 20.0	TE1C471MF	051023	200
1000	760	10.0 x 25.0	TE1C102MK	051024	100
2200	1200	13.0 x 26.0	TE1C222MM	051025	100
4700	1900	16.0 x 34.0	TE1C472MP	051027	50
25 Volt					
10	47	5.0 x 12.5	TE1E100MA	051000	500
22	70	6.3 x 12.5	TE1E220MB	051028	500
47	100	6.3 x 12.5	TE1E470MB	051030	500
100	180	6.3 x 16.5	TE1E101MC	051031	400
220	300	8.0 x 16.0	TE1E221MD	051032	300
470	500	10.0 x 20.0	TE1E471MG	051034	100
1000	950	13.0 x 21.0	TE1E102MJ	051035	100
2200	1450	16.0 x 29.0	TE1E222MN	051036	50
4700	2160	16.0 x 40.0	TE1E472MR	051037	25
40 Volt					
10	38	5.0 x 12.5	TE1G100MA	051038	500
22	67	6.3 x 12.5	TE1G220MB	051039	500
47	113	8.0 x 16.0	TE1G470MD	051041	300
100	189	8.0 x 20.0	TE1G101MF	051042	200
220	335	10.0 x 20.0	TE1G221MG	051043	100
470	590	13.0 x 26.0	TE1G471MM	051045	100
1000	1095	16.0 x 34.0	TE1G102MP	051046	50
2200	1624	18.0 x 40.0	TE1G222MS	051047	25
4700 (35V)	2300	18.0 x 40.0	TE1V472MS	051049	25
63 Volt					
1.0	16	5.0 x 12.5	TE1J010MA	051058	500
2.2	21	5.0 x 12.5	TE1J2R2MA	051059	500
4.7	38	6.3 x 12.5	TE1J4R7MB	051061	500
10	62	6.3 x 12.5	TE1J100MB	051062	500
22	100	6.3 x 12.5	TE1J220MB	051063	500
47	180	8.0 x 16.0	TE1J470MD	051065	300
100	280	10.0 x 16.0	TE1J101ME	051066	200
220	470	10.0 x 25.0	TE1J221MK	051067	100
470	900	13.0 x 26.0	TE1J471MM	051069	100
1000	1500	16.0 x 40.0	TE1J102MR	051070	25
2200	2060	22.0 x 40.0	TE1J222MT	051071	20
100 Volt					
1.0	12	5.0 x 12.5	TE2A010MA	051073	500
2.2	21	6.3 x 12.5	TE2A2R2MB	051074	500
4.7	39	6.3 x 12.5	TE2A4R7MB	051076	500
10	75	6.3 x 16.5	TE2A100MC	051077	400
22	120	8.0 x 16.0	TE2A220MD	051078	300
47	230	10.0 x 20.0	TE2A470MG	051080	100
100	420	13.0 x 21.0	TE2A101MJ	051081	100
220	700	16.0 x 30.0	TE2A221MW	051082	50
470	1031	16.0 x 40.0	TE2A471MR	051084	25
1000	1447	22.0 x 40.0	TE2A102MT	051085	25
250 Volt					
1.0	13	6.3 x 16.0	TE2E010MC	051099	400
2.2	23	8.0 x 16.0	TE2E2R2MD	051100	300
4.7	37	8.0 x 20.0	TE2E4R7MF	051102	200
10	57	10.0 x 16.0	TE2E100ME	051103	200
22	101	10.0 x 25.0	TE2E220MK	051104	100
47	184	13.0 x 25.0	TE2E470ML	051106	100
350 Volt					
10	62	10.0 x 20.0	TE2V100MG	051114	100
22	109	13.0 x 20.0	TE2V220MH	051115	100
47	147	16.0 x 33.0	TE2V470MP	051117	50
450 Volt					
1.0	19	8.0 x 16.0	TE2W010MD	051121	300
2.2	30	10.0 x 20.0	TE2W2R2MG	051122	100
4.7	50	10.0 x 25.0	TE2W4R7MK	051124	100
10	80	13.0 x 20.0	TE2W100MH	051125	100
22	130	13.0 x 30.0	TE2W220MW	051126	50
47	230	18.0 x 40.0	TE2W470MS	051128	25
100	470	22.0 x 40.0	TE2W101MT	051129	20



NOVER type TH

Axial lead aluminium electrolytic capacitors with an extended upper temperature limit of 105°C. Ideal for equipment running at high ambient temperatures where a greater climatic safety margin and improved reliability is required. All voltages and values in loose format are shown on the following page, whilst taped and reeled versions are also available.



- High temperature **105°C**
- Capacitance tolerance **20%**
- Leakage current **≤0.01CV**
- Body colour **Light Green**

Specification

Conforms to JIS C5141-1982 Char.W
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 105°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +105°C
 Leakage current ≤0.01CV or 3μA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000μF above 1000μF

Rated voltage	10V	16V	25V	35V	63V	100V	d.c.
Tan δ (max)*	0.20	0.17	0.15	0.12	0.10	0.08	

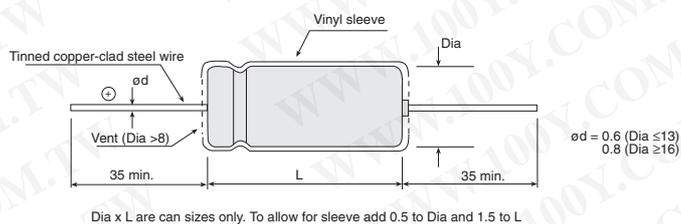
Surge voltage capability

Rated voltage	10V	16V	25V	35V	63V	100V	d.c.
Surge voltage	13V	20V	32V	44V	79V	125V	d.c.

Multiplier for ripple current

Frequency coefficient				
Freq(Hz)	50/60	120	1K	
Rated Voltage (V)				
16 ~ 25	0.85	1.0	1.10	
35 ~ 100	0.80	1.0	1.15	

Dimensions (mm)



◆ TAPED AND REELED ◆
Also available



NOVER type TH

Value (μ F)	Ripple Current (mA)	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs
10 Volt					
22	38	5.0 x 12.5	TH1A220MA	062004	500
47	56	5.0 x 12.5	TH1A470MA	062006	500
100	93	6.3 x 12.5	TH1A101MB	062007	500
220	177	6.3 x 16.0	TH1A221MC	062008	400
470	267	8.0 x 20.0	TH1A471MF	062010	200
1000	488	10.0 x 20.0	TH1A102MG	062011	100
2200	783	13.0 x 25.0	TH1A222ML	062012	100
4700	1483	16.0 x 30.0	TH1A472MN	062014	50
16 Volt					
22	38	5.0 x 12.5	TH1C220MA	062017	500
47	61	6.3 x 12.5	TH1C470MB	062019	500
100	101	6.3 x 16.0	TH1C101MC	062020	400
220	177	8.0 x 16.0	TH1C221MD	062021	300
470	329	10.0 x 16.0	TH1C471ME	062023	200
1000	572	10.0 x 25.0	TH1C102MK	062024	100
2200	912	13.0 x 30.0	TH1C222MW	062025	50
4700	1585	16.0 x 40.0	TH1C472MR	062027	25
25 Volt					
10	27	5.0 x 12.5	TH1E100MA	062000	500
22	44	6.3 x 12.5	TH1E220MB	062028	500
47	73	6.3 x 12.5	TH1E470MB	062030	500
100	127	8.0 x 16.0	TH1E101MD	062031	300
220	210	8.0 x 20.0	TH1E221MF	062032	200
470	384	10.0 x 20.0	TH1E471MG	062034	100
1000	672	13.0 x 25.0	TH1E102ML	062035	100
2200	1099	16.0 x 30.0	TH1E222MN	062036	50
4700	1498	18.0 x 40.0	TH1E472MS	062037	25
35 Volt					
10	30	5.0 x 12.5	TH1V100MA	062038	500
22	49	6.3 x 12.5	TH1V220MB	062039	500
47	82	6.3 x 16.0	TH1V470MC	062041	400
100	158	8.0 x 16.0	TH1V101MD	062042	300
220	266	10.0 x 16.0	TH1V221ME	062043	200
470	467	10.0 x 25.0	TH1V471MK	062045	100
1000	816	13.0 x 30.0	TH1V102MW	062046	50
2200	1140	16.0 x 40.0	TH1V222MR	062047	25
4700	1550	22.0 x 40.0	TH1V472MT	062049	20
63 Volt					
1.0	10	5.0 x 12.5	TH1J010MA	062058	500
2.2	15	5.0 x 12.5	TH1J2R2MA	062059	500
4.7	25	6.3 x 12.5	TH1J4R7MB	062061	500
10	36	6.3 x 12.5	TH1J100MB	062062	500
22	61	6.3 x 16.0	TH1J220MC	062063	400
47	117	8.0 x 16.0	TH1J470MD	062065	300
100	196	10.0 x 16.0	TH1J101ME	062066	200
220	346	10.0 x 25.0	TH1J221MK	062067	100
470	597	13.0 x 30.0	TH1J471MW	062069	50
1000	1163	16.0 x 40.0	TH1J102MR	062070	25
2200	1320	22.0 x 40.0	TH1J222MT	062071	20
100 Volt					
1.0	10	5.0 x 12.5	TH2A010MA	062073	500
2.2	17	6.3 x 12.5	TH2A2R2MB	062074	500
4.7	25	6.3 x 12.5	TH2A4R7MB	062076	500
10	45	6.3 x 16.0	TH2A100MC	062077	400
22	81	8.0 x 16.0	TH2A220MD	062078	300
47	134	10.0 x 20.0	TH2A470MG	062080	100
100	255	10.0 x 25.0	TH2A101MK	062081	100
220	439	13.0 x 30.0	TH2A221MW	062082	50



NOVER type LS

A range of high CV, high ripple current, aluminium capacitors suitable for general purpose use up to 85°C ambient. Housed in compact bodies and fitted with snap-in terminals on an standard 10mm pitch. The entire range of available values and voltages in loose format, are shown on the following pages.



- High CV
 - High ripple current
 - Compact body
 - Snap-in terminals
 - Endurance
 - Capacitance tolerance
 - Leakage current
 - Body colour
- Standard 10mm pitch**
2000 hours at 85°C
20%
≤0.01CV
Black

Specification

Conforms to JIS C5141-1982 Char.W
 Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +85°C (16 ~ 100V)
 -25°C to +85°C (160 ~ 450V)
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000µF above 5000µF

Rated voltage	16V	25V	35V	50V	63V	80V	100V	d.c.
Tan δ (max)*	0.40	0.30	0.25	0.20	0.15	0.15	0.15	
Rated voltage	160V	200V	250V	350V	400V	450V	d.c.	
Tan δ (max)	0.15	0.15	0.15	0.15	0.15	0.15		

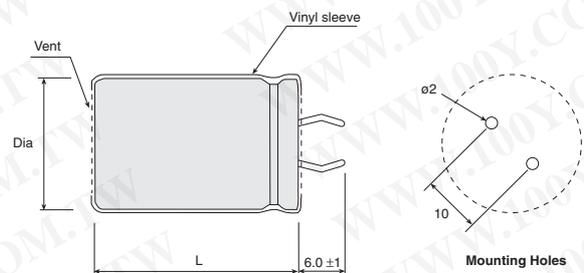
Surge voltage capability

Rated voltage	16V	25V	35V	50V	63V	80V	100V	d.c.
Surge voltage	20V	32V	44V	63V	79V	100V	125V	d.c.
Rated voltage	160V	200V	250V	350V	400V	450V	d.c.	
Surge voltage	200V	250V	300V	400V	450V	500V	d.c.	

Multiplier for ripple current

Frequency coefficient					
Freq(Hz)	50	120	1K	10K	20K
Rated Voltage (V)					
16 ~ 50	0.95	1.0	1.10	1.15	1.15
63 ~ 100	0.95	1.0	1.16	1.30	1.33
160 ~ 450	0.90	1.0	1.20	1.50	1.55
Temperature coefficient					
Temperature (°C)	+40	+55	+70	+85	
Rated Voltage (V)					
<160	2.1	1.8	1.5	1.0	
≥160	1.7	1.5	1.3	1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 1.0 to Dia and 2.0 to L



NOVER type LS

Value (µF)	Ripple Current (A)	Pitch	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code	Pack Qty pcs
16 Volt						
4700	2.20	10	22.0 x 25.0	LS1C472MA	054002	100
6800	2.33	10	22.0 x 25.0	LS1C682MA	054003	100
8200	2.56	10	22.0 x 30.0	LS1C822MB	054053	100
10000	2.81	10	22.0 x 30.0	LS1C103MB	054004	100
15000	3.64	10	25.0 x 30.0	LS1C153ME	054005	100
22000	4.44	10	25.0 x 40.0	LS1C223MG	054006	100
33000	5.38	10	30.0 x 45.0	LS1C333MM	054007	80
25 Volt						
4700	2.18	10	22.0 x 25.0	LS1E472MA	054101	100
6800	2.56	10	22.0 x 30.0	LS1E682MB	054102	100
8200	2.80	10	22.0 x 35.0	LS1E822MJ	054123	100
8200	2.86	10	25.0 x 40.0	LS1E822MG	054103	100
10000	3.16	10	25.0 x 30.0	LS1E103ME	054105	100
15000	4.00	10	25.0 x 40.0	LS1E153MG	054106	100
22000	5.19	10	30.0 x 40.0	LS1E223MV	054107	80
35 Volt						
3300	2.14	10	22.0 x 25.0	LS1V332MA	054203	100
4700	2.28	10	25.0 x 25.0	LS1V472MD	054204	100
6800	2.89	10	25.0 x 35.0	LS1V682MF	054205	100
8200	3.33	10	25.0 x 40.0	LS1V822MG	054255	100
10000	3.59	10	25.0 x 40.0	LS1V103MG	054226	100
10000	3.62	10	25.0 x 45.0	LS1V103MH	054206	100
10000	3.70	10	30.0 x 40.0	LS1V103MV	054216	80
15000	4.80	10	30.0 x 45.0	LS1V153MM	054207	80
22000	6.40	10	30.0 x 50.0	LS1V223MN	054208	80
50 Volt						
2200	1.93	10	22.0 x 30.0	LS1H222MB	054303	100
3300	2.41	10	22.0 x 30.0	LS1H332MB	054304	100
4700	3.01	10	22.0 x 40.0	LS1H472MC	054305	100
4700	3.01	10	35.0 x 25.0	LS1H472MS	054315	50
6800	3.87	10	30.0 x 35.0	LS1H682MR	054306	80
8200	4.42	10	30.0 x 40.0	LS1H822MV	054356	80
10000	5.02	10	30.0 x 40.0	LS1H103MV	054327	80
10000	5.06	10	30.0 x 45.0	LS1H103MM	054307	80
15000	6.44	10	35.0 x 50.0	LS1H153MZ	054308	50
63 Volt						
2200	2.30	10	25.0 x 25.0	LS1J222MD	054424	100
2200	2.35	10	25.0 x 30.0	LS1J222ME	054404	100
3300	2.69	10	25.0 x 30.0	LS1J332ME	054425	100
3300	2.73	10	25.0 x 40.0	LS1J332MG	054405	100
4700	3.37	10	30.0 x 30.0	LS1J472MK	054416	80
4700	3.42	10	30.0 x 40.0	LS1J472MV	054406	80
6800	4.41	10	30.0 x 40.0	LS1J682MV	054427	80
6800	4.47	10	30.0 x 50.0	LS1J682MN	054407	80
8200	4.90	10	30.0 x 50.0	LS1J822MN	054428	80
10000	5.32	10	35.0 x 40.0	LS1J103MW	054438	50
10000	5.49	10	35.0 x 50.0	LS1J103MZ	054408	50
80 Volt						
1500	2.01	10	22.0 x 30.0	LS1K152MB	054913	100
2200	2.53	10	22.0 x 40.0	LS1K222MC	054914	100
3300	3.25	10	25.0 x 40.0	LS1K332MG	054915	100
4700	4.28	10	25.0 x 50.0	LS1K472ML	054916	100
6800	5.18	10	30.0 x 50.0	LS1K682MN	054917	80
8200	5.83	10	35.0 x 50.0	LS1K822MZ	054918	50
100 Volt						
1000	2.10	10	22.0 x 30.0	LS2A102MB	054504	100
2200	3.20	10	30.0 x 40.0	LS2A222MV	054506	80
3300	4.10	10	35.0 x 45.0	LS2A332MQ	054507	50
4700	5.10	10	35.0 x 40.0	LS2A472MW	054528	50
4700	5.14	10	35.0 x 45.0	LS2A472MQ	054508	50

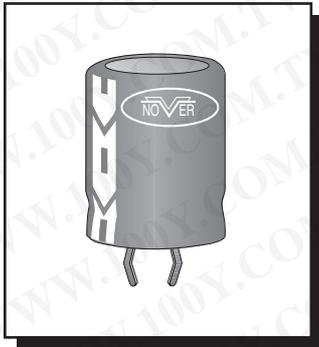
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NOVER type LS (continued)

Value (μ F)	Ripple Current (A)	Pitch	Dimensions (mm)		Nover Part No.	Anglia	Pack Qty pcs
			Dia. x L	Order Code			
160 Volt							
330	1.35	10	22.0 x 30.0		LS2C331MB	054603	100
470	1.75	10	25.0 x 30.0		LS2C471ME	054604	100
680	2.20	10	25.0 x 35.0		LS2C681MF	054605	100
820	2.46	10	25.0 x 45.0		LS2C821MH	054606	100
1000	2.80	10	25.0 x 50.0		LS2C102ML	054607	100
200 Volt							
220	1.10	10	22.0 x 30.0		LS2D221MB	054703	100
330	1.48	10	22.0 x 30.0		LS2D331MB	054734	100
330	1.50	10	25.0 x 30.0		LS2D331ME	054724	100
330	1.50	10	22.0 x 40.0		LS2D331MC	054704	100
470	1.86	10	25.0 x 35.0		LS2D471MF	054725	100
470	1.90	10	25.0 x 40.0		LS2D471MG	054705	100
680	2.36	10	25.0 x 40.0		LS2D681MG	054736	100
680	2.40	10	25.0 x 45.0		LS2D681MH	054726	100
680	2.44	10	25.0 x 50.0		LS2D681ML	054706	100
820	2.69	10	30.0 x 40.0		LS2D821MV	054756	80
1000	2.88	10	35.0 x 30.0		LS2D102MP	054727	50
1000	3.05	10	35.0 x 40.0		LS2D102MW	054707	50
250 Volt							
220	1.30	10	22.0 x 35.0		LS2E221MB	054803	100
330	1.68	10	25.0 x 35.0		LS2E331ME	054804	100
470	2.05	10	25.0 x 40.0		LS2E471MF	054805	100
680	2.78	10	30.0 x 45.0		LS2E681MH	054806	80
820	3.13	10	30.0 x 50.0		LS2E821MV	054807	80
1000	3.50	10	35.0 x 50.0		LS2E102MW	054808	50
350 Volt							
100	0.65	10	22.0 x 35.0		LS2V101MJ	054943	100
150	0.87	10	22.0 x 40.0		LS2V151MC	054944	100
220	1.25	10	25.0 x 40.0		LS2V221MG	054945	100
330	1.51	10	30.0 x 40.0		LS2V331MV	054946	80
470	2.15	10	35.0 x 45.0		LS2V471MQ	054947	50
680	2.35	10	35.0 x 50.0		LS2V681MZ	054948	50
400 Volt							
47	0.50	10	22.0 x 25.0		LS2G470MA	054902	100
100	0.72	10	22.0 x 30.0		LS2G101MB	054904	100
150	0.95	10	25.0 x 30.0		LS2G151ME	054905	100
220	1.23	10	30.0 x 30.0		LS2G221MK	054926	80
220	1.25	10	30.0 x 35.0		LS2G221MR	054906	80
330	1.61	10	30.0 x 40.0		LS2G331MV	054927	80
330	1.68	10	30.0 x 45.0		LS2G331MM	054907	80
470	2.10	10	35.0 x 40.0		LS2G471MW	054928	50
470	2.15	10	35.0 x 45.0		LS2G471MQ	054908	50
450 Volt							
47	0.56	10	22.0 x 25.0		LS2W470MA	054973	100
100	0.70	10	25.0 x 35.0		LS2W101MF	054975	100
150	1.08	10	25.0 x 40.0		LS2W151MG	054976	100
220	1.30	10	30.0 x 45.0		LS2W221MM	054977	80
330	1.49	10	35.0 x 45.0		LS2W331MQ	054978	50
470	1.92	10	35.0 x 50.0		LS2W471MZ	054979	50

NOVER type LH

Offering a high temperature capability of 105°C and an endurance of 2000 hours, the LH aluminium electrolytic snap-in capacitor range is designed for applications where ambient conditions may exceed the operating specification of the general purpose LS series. The entire range of values and voltages in loose format, are shown on the following pages.



- High temperature
 - High CV
 - High ripple current
 - Snap-in terminals
 - Endurance
 - Capacitance tolerance
 - Leakage current
 - Body colour
- Standard 10mm pitch**
2000 hours at 105°C
20%
≤0.01CV
Grey

Specification

Conforms to JIS C5141-1982 Char.W
 Endurance test 2000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 105°C
 (see also Multiplier table below)
 Operating temperature range -40°C to +105°C (16 ~ 100V)
 -25°C to +105°C (160 ~ 450V)
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

*Add 0.01 for every 1000µF above 5000µF

Rated voltage	16V	25V	35V	50V	63V	100V	d.c.
Tan δ (max)*	0.40	0.30	0.25	0.20	0.15	0.15	
Rated voltage	160V	200V	250V	350V	400V	450V	d.c.
Tan δ (max)	0.15	0.15	0.15	0.15	0.15	0.15	

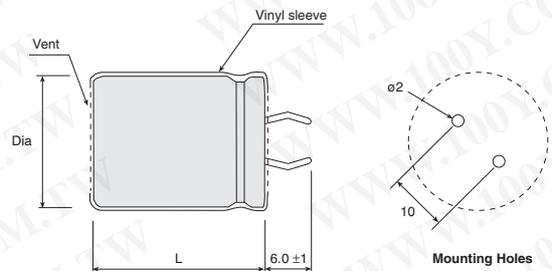
Surge voltage capability

Rated voltage	16V	25V	35V	50V	63V	100V	d.c.
Surge voltage	20V	32V	44V	63V	79V	125V	d.c.
Rated voltage	160V	200V	250V	350V	400V	450V	d.c.
Surge voltage	200V	250V	300V	400V	450V	500V	d.c.

Multiplier for ripple current

Frequency coefficient						
Freq(Hz)	50	120	1K	10K	20K	
Rated Voltage (V)						
16 ~ 50	0.95	1.0	1.10	1.15	1.15	
63 ~ 100	0.95	1.0	1.16	1.30	1.33	
160 ~ 450	0.90	1.0	1.20	1.50	1.55	
Temperature coefficient						
Temperature (°C)	+40	+55	+70	+85	+105	
Factor	2.7	2.5	2.1	1.7	1.0	

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 1.0 to Dia and 2.0 to L

LH continued
 overleaf > > > >

NOVER type LH

Value (μ F)	Ripple Current (A)	Dimensions (mm)		Nover Part No.	Anglia	Pack Qty pcs
		Pitch	Dia. x L		Order Code	
16 Volt						
4700	1.60	10	22.0 x 25.0	LH1C472MA	055002	100
6800	1.75	10	22.0 x 25.0	LH1C682MA	055003	100
8200	2.00	10	22.0 x 30.0	LH1C822MB	055053	100
10000	2.10	10	22.0 x 30.0	LH1C103MB	055004	100
22000	3.36	10	25.0 x 45.0	LH1C223MH	055006	100
33000	4.30	10	30.0 x 45.0	LH1C333MM	055007	80
25 Volt						
4700	1.61	10	22.0 x 30.0	LH1E472MB	055101	100
6800	2.00	10	22.0 x 40.0	LH1E682MC	055104	100
6800	2.09	10	25.0 x 30.0	LH1E682ME	055102	100
8200	2.34	10	25.0 x 35.0	LH1E822MF	055123	100
10000	2.61	10	25.0 x 40.0	LH1E103MG	055105	100
22000	4.04	10	30.0 x 45.0	LH1E223MM	055107	80
35 Volt						
3300	1.57	10	22.0 x 30.0	LH1V332MB	055203	100
4700	2.02	10	25.0 x 30.0	LH1V472ME	055204	100
6800	2.31	10	25.0 x 40.0	LH1V682MG	055205	100
8200	2.73	10	25.0 x 45.0	LH1V822MH	055255	100
10000	3.05	10	25.0 x 50.0	LH1V103ML	055206	100
22000	4.92	10	35.0 x 50.0	LH1V223MZ	055208	50
50 Volt						
2200	1.60	10	22.0 x 35.0	LH1H222MJ	055303	100
3300	1.97	10	25.0 x 35.0	LH1H332MF	055304	100
4700	2.43	10	25.0 x 40.0	LH1H472MG	055305	100
6800	3.30	10	30.0 x 40.0	LH1H682MV	055306	80
8200	3.60	10	30.0 x 45.0	LH1H822MM	055356	80
10000	4.05	10	30.0 x 50.0	LH1H103MN	055307	80
63 Volt						
2200	1.75	10	25.0 x 30.0	LH1J222ME	055404	100
3300	2.33	10	25.0 x 40.0	LH1J332MG	055405	100
4700	2.86	10	30.0 x 40.0	LH1J472MV	055406	80
6800	3.65	10	30.0 x 50.0	LH1J682MN	055407	80
8200	4.04	10	35.0 x 50.0	LH1J822MZ	055527	50
10000	4.48	10	35.0 x 50.0	LH1J103MZ	055408	50
100 Volt						
1000	1.47	10	22.0 x 30.0	LH2A102MB	055504	100
2200	2.55	10	30.0 x 40.0	LH2A222MV	055506	80
3300	3.30	10	35.0 x 45.0	LH2A332MQ	055507	50
4700	3.80	10	35.0 x 50.0	LH2A472MZ	055508	50
160 Volt						
330	1.03	10	22.0 x 30.0	LH2C331MB	055603	100
470	1.28	10	25.0 x 30.0	LH2C471ME	055604	100
680	1.70	10	25.0 x 35.0	LH2C681MF	055605	100
820	1.92	10	25.0 x 40.0	LH2C821MG	055606	100
1000	2.17	10	25.0 x 50.0	LH2C102ML	055607	100



NOVER type LH (continued)

Value (µF)	Ripple Current (A)	Dimensions (mm)		Nover Part No.	Anglia	Pack Qty pcs
		Pitch	Dia. x L		Order Code	
200 Volt						
220	0.83	10	22.0 x 25.0	LH2D221MA	055723	100
220	1.00	10	22.0 x 30.0	LH2D221MB	055703	100
330	1.20	10	25.0 x 30.0	LH2D331ME	055704	100
470	1.44	10	25.0 x 35.0	LH2D471MF	055705	100
680	1.76	10	25.0 x 45.0	LH2D681MH	055706	100
820	2.11	10	30.0 x 40.0	LH2D821MV	055756	80
1000	2.40	10	35.0 x 40.0	LH2D102MM	055707	50
250 Volt						
220	0.97	10	22.0 x 35.0	LH2E221MJ	055803	100
330	1.26	10	25.0 x 35.0	LH2E331MF	055804	100
470	1.61	10	25.0 x 40.0	LH2E471MG	055805	100
680	2.09	10	30.0 x 45.0	LH2E681MM	055806	80
820	2.35	10	30.0 x 50.0	LH2E821MN	055807	80
1000	2.64	10	35.0 x 50.0	LH2E102MZ	055808	50
350 Volt						
100	0.53	10	22.0 x 35.0	LH2V101MJ	055943	100
150	0.73	10	22.0 x 40.0	LH2V151MC	055944	100
220	0.92	10	25.0 x 40.0	LH2V221MG	055945	100
330	1.24	10	30.0 x 40.0	LH2V331MV	055946	80
470	1.57	10	35.0 x 45.0	LH2V471MQ	055947	50
680	1.96	10	35.0 x 50.0	LH2V681MZ	055948	50
400 Volt						
47	0.32	10	22.0 x 25.0	LH2G470MA	055902	100
100	0.62	10	22.0 x 35.0	LH2G101MJ	055904	100
150	0.75	10	22.0 x 40.0	LH2G151MC	055905	100
150	0.85	10	25.0 x 40.0	LH2G151MG	055925	100
220	1.24	10	30.0 x 40.0	LH2G221MV	055906	80
330	1.47	10	30.0 x 50.0	LH2G331MN	055907	80
470	1.87	10	35.0 x 50.0	LH2G471MZ	055908	50
450 Volt						
47	0.36	10	22.0 x 25.0	LH2W470MA	055973	100
100	0.67	10	22.0 x 35.0	LH2W101MJ	055974	100
150	0.85	10	25.0 x 40.0	LH2W151MG	055975	100
220	1.10	10	30.0 x 45.0	LH2W221MM	055976	80
330	1.44	10	35.0 x 45.0	LH2W331MQ	055977	50
470	1.80	10	35.0 x 50.0	LH2W471MZ	055978	50



NOVER type LA

A range of high CV, low ESR, snap-in aluminium electrolytic capacitors on a standard 10mm pitch. The high response characteristics of the LA series make it especially suitable for amplification power supplies and other audio based equipment. The entire range of available values and voltages in loose format, are shown on the following page.



- Low ESR
 - High CV
 - Snap-in terminals
 - Endurance
 - Capacitance tolerance
 - Leakage current
 - Body colour
- Standard 10mm pitch**
2000 hours at 85°C
20%
≤0.01CV
Black

Specification

Endurance test	2000 hours at 85°C
Capacitance tolerance	±20% at 120Hz, 20°C
Ripple current (as listed)	measured at 120Hz, 85°C (see also Multiplier table below)
Operating temperature range	-40°C to +85°C
Leakage current	≤0.01CV or 3µA (whichever is greater) after 2 min.

Dissipation factor (120Hz, 20°C)

*Add 0.02 for every 1000µF above 10000µF

Rated voltage	50V	63V	80V	100V	d.c.
Tan δ (max) *	0.20	0.15	0.15	0.15	

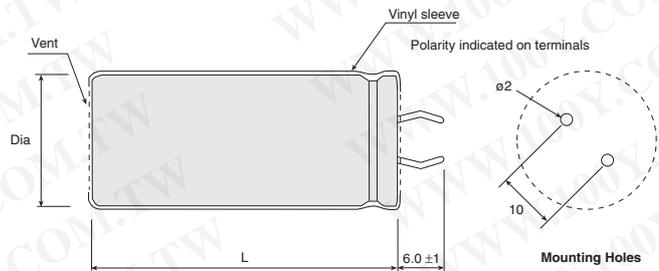
Surge voltage capability

Rated voltage	50V	63V	80V	100V	d.c.
Surge voltage	63V	79V	100V	125V	d.c.

Multiplier for ripple current

Frequency coefficient		Freq(Hz)			
		50	120	1K	10K
Rated Voltage (V)	50 ~ 100	0.95	1.0	1.1	1.3
	Temperature coefficient				
Temperature (°C)		+40	+55	+70	+85
Factor		2.1	1.8	1.5	1.0

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 1.0 to Dia and 2.0 to L



NOVER type LA

Value (μ F)	Ripple Current (A)	Pitch	Dimensions (mm)		Nover Part No.	Anglia
			Dia. x L			Order Code
50 Volt						
4700	3.25	10	25.0 x 50.0		LA1H472MG5	069305
6800	4.18	10	25.0 x 50.0		LA1H682MG5	069306
8200	4.76	10	30.0 x 50.0		LA1H822MH5	069356
10000	5.42	10	30.0 x 60.0		LA1H103MH6	069307
12000	6.16	10	30.0 x 60.0		LA1H123MH6	069357
15000	6.89	10	35.0 x 60.0		LA1H153MJ6	069308
18000	7.88	10	35.0 x 70.0		LA1H183MJ7	069309
22000	8.20	10	35.0 x 80.0		LA1H223MJ8	069310
63 Volt						
4700	3.64	10	30.0 x 50.0		LA1J472MH5	069406
6800	4.76	10	30.0 x 60.0		LA1J682MH6	069407
8200	5.29	10	30.0 x 60.0		LA1J822MH6	069428
10000	5.93	10	30.0 x 60.0		LA1J103MH6	069408
12000	6.80	10	30.0 x 70.0		LA1J123MH7	069409
15000	7.92	10	35.0 x 80.0		LA1J153MJ8	069410
80 Volt						
4700	4.42	10	30.0 x 50.0		LA1K472MH5	069926
6800	5.57	10	30.0 x 60.0		LA1K682MH6	069927
8200	6.30	10	30.0 x 80.0		LA1K822MH8	069556
10000	7.06	10	35.0 x 80.0		LA1K103MJ8	069928
12000	7.80	10	35.0 x 80.0		LA1K123MJ8	069557
100 Volt						
4700	5.52	10	30.0 x 60.0		LA2A472MH6	069508
6800	6.50	10	35.0 x 70.0		LA2A682MJ7	069509
8200	7.20	10	35.0 x 80.0		LA2A822MJ8	069510



For the very latest Nover product data and news visit the Nover website:

www.nover.com





GENERAL PURPOSE

LUG

NOVER type LE

Value (μ F)	Ripple Current (A)	Dimensions (mm)		Nover Part No.	Anglia	Pack Qty pcs
		Pitch x Terminal Height	Dia. x L		Order Code	
16 Volt						
4700	2.41	8.5 x 10.0	22.0 x 30.0	LE1C472TM3	064002	100
6800	2.53	8.5 x 10.0	22.0 x 30.0	LE1C682TM3	064003	100
10000	3.10	10.0 x 12.0	25.0 x 40.0	LE1C103TG4	064004	100
15000	4.01	14.0 x 12.0	30.0 x 50.0	LE1C153TH5	064005	80
22000	4.88	14.0 x 12.0	30.0 x 63.0	LE1C223TH6	064006	80
33000	5.92	14.0 x 12.0	35.0 x 63.0	LE1C333TJ6	064007	50
47000	7.42	14.0 x 12.0	35.0 x 80.0	LE1C473TJ8	064008	50
68000	8.60	14.0 x 12.0	40.0 x 100.0	LE1C683TK9	064009	50
25 Volt						
3300	2.06	8.5 x 10.0	22.0 x 30.0	LE1E332TM3	064100	100
4700	2.40	8.5 x 10.0	22.0 x 40.0	LE1E472TM4	064101	100
6800	2.82	10.0 x 12.0	25.0 x 40.0	LE1E682TG4	064102	100
10000	3.47	10.0 x 12.0	25.0 x 50.0	LE1E103TG5	064105	100
15000	4.40	14.0 x 12.0	30.0 x 63.0	LE1E153TH6	064106	80
22000	5.71	14.0 x 12.0	35.0 x 63.0	LE1E223TJ6	064107	50
33000	6.80	14.0 x 12.0	35.0 x 80.0	LE1E333TJ8	064108	50
47000	8.02	14.0 x 12.0	40.0 x 100.0	LE1E473TK9	064109	50
35 Volt						
2200	1.89	8.5 x 10.0	22.0 x 30.0	LE1V222TM3	064202	100
3300	2.35	8.5 x 10.0	22.0 x 40.0	LE1V332TM4	064203	100
4700	2.51	10.0 x 12.0	25.0 x 40.0	LE1V472TG4	064204	100
6800	3.18	10.0 x 12.0	25.0 x 50.0	LE1V682TG5	064205	100
10000	3.95	14.0 x 12.0	30.0 x 50.0	LE1V103TH5	064206	80
15000	5.28	14.0 x 12.0	35.0 x 63.0	LE1V153TJ6	064207	50
22000	7.04	14.0 x 12.0	35.0 x 80.0	LE1V223TJ8	064208	50
33000	7.80	14.0 x 12.0	40.0 x 100.0	LE1V333TK9	064209	50
50 Volt						
1500	1.52	8.5 x 10.0	22.0 x 30.0	LE1H152TM3	064302	100
2200	2.12	8.5 x 10.0	22.0 x 40.0	LE1H222TM4	064303	100
3300	2.65	10.0 x 12.0	25.0 x 40.0	LE1H332TG4	064304	100
4700	3.31	10.0 x 12.0	25.0 x 50.0	LE1H472TG5	064305	100
6800	4.26	14.0 x 12.0	30.0 x 50.0	LE1H682TH5	064306	80
10000	5.52	14.0 x 12.0	35.0 x 63.0	LE1H103TJ6	064307	50
15000	7.08	14.0 x 12.0	35.0 x 80.0	LE1H153TJ8	064308	50
22000	7.92	14.0 x 12.0	35.0 x 100.0	LE1H223TJ9	064309	50
63 Volt						
1000	1.72	8.5 x 10.0	22.0 x 30.0	LE1J102TM3	064402	100
1500	2.04	8.5 x 10.0	22.0 x 40.0	LE1J152TM4	064403	100
2200	2.58	10.0 x 12.0	25.0 x 40.0	LE1J222TG4	064404	100
3300	2.96	10.0 x 12.0	25.0 x 50.0	LE1J332TG5	064405	100
4700	3.71	14.0 x 12.0	30.0 x 50.0	LE1J472TH5	064406	80
6800	4.91	14.0 x 12.0	35.0 x 50.0	LE1J682TJ5	064407	50
10000	6.04	14.0 x 12.0	35.0 x 80.0	LE1J103TJ8	064408	50
15000	7.13	14.0 x 12.0	35.0 x 100.0	LE1J153TJ9	064409	50
80 Volt						
680	1.05	8.5 x 10.0	22.0 x 30.0	LE1K681TM3	064921	100
1000	1.54	8.5 x 10.0	22.0 x 40.0	LE1K102TM4	064922	100
1500	2.21	8.5 x 10.0	22.0 x 40.0	LE1K152TM4	064923	100
2200	2.53	10.0 x 12.0	25.0 x 50.0	LE1K222TG5	064924	100
3300	3.57	14.0 x 12.0	30.0 x 50.0	LE1K332TH5	064925	80
4700	4.71	14.0 x 12.0	35.0 x 50.0	LE1K472TJ5	064926	50
6800	5.70	14.0 x 12.0	35.0 x 63.0	LE1K682TJ6	064927	50
10000	6.82	14.0 x 12.0	35.0 x 100.0	LE1K103TJ9	064928	50
100 Volt						
470	1.32	8.5 x 10.0	22.0 x 30.0	LE2A471TM3	064502	100
680	1.86	8.5 x 10.0	22.0 x 40.0	LE2A681TM4	064503	100
1000	2.31	10.0 x 12.0	25.0 x 40.0	LE2A102TG4	064504	100
1500	2.89	10.0 x 12.0	25.0 x 50.0	LE2A152TG5	064505	100
2200	3.52	14.0 x 12.0	30.0 x 50.0	LE2A222TH5	064506	80
3300	4.51	14.0 x 12.0	35.0 x 50.0	LE2A332TJ5	064507	50
4700	5.61	14.0 x 12.0	35.0 x 63.0	LE2A472TJ6	064508	50
6800	6.02	14.0 x 12.0	35.0 x 100.0	LE2A682TJ9	064509	50

LE continued overleaf > > > >



NOVER type LE (continued)

Value (μ F)	Ripple Current (A)	Dimensions (mm)		Nover Part No.	Anglia	Pack Qty pcs
		Pitch x Terminal Height	Dia. x L		Order Code	
160 Volt						
150	0.88	8.5 x 10.0	22.0 x 30.0	LE2C151TM3	064601	100
220	1.14	8.5 x 10.0	22.0 x 40.0	LE2C221TM4	064602	100
330	1.48	10.0 x 12.0	25.0 x 50.0	LE2C331TG5	064603	100
470	1.92	14.0 x 12.0	30.0 x 50.0	LE2C471TH5	064604	80
680	2.42	14.0 x 12.0	35.0 x 50.0	LE2C681TJ5	064605	50
1000	3.08	14.0 x 12.0	35.0 x 63.0	LE2C102TJ6	064607	50
1500	4.24	14.0 x 12.0	35.0 x 80.0	LE2C152TJ8	064608	50
2200	5.86	14.0 x 12.0	40.0 x 100.0	LE2C222TK9	064609	50
200 Volt						
100	0.52	8.5 x 10.0	22.0 x 30.0	LE2D101TM3	064701	100
150	0.71	8.5 x 10.0	22.0 x 40.0	LE2D151TM4	064702	100
220	1.21	10.0 x 12.0	25.0 x 40.0	LE2D221TG4	064703	100
330	1.62	10.0 x 12.0	25.0 x 50.0	LE2D331TG5	064704	100
470	2.00	14.0 x 12.0	30.0 x 50.0	LE2D471TH5	064705	80
680	2.59	14.0 x 12.0	35.0 x 50.0	LE2D681TJ5	064706	50
1000	3.16	14.0 x 12.0	35.0 x 63.0	LE2D102TJ6	064707	50
1500	4.12	14.0 x 12.0	35.0 x 100.0	LE2D152TJ9	064708	50
2200	5.43	14.0 x 12.0	40.0 x 100.0	LE2D222TK9	064709	50
250 Volt						
68	0.52	8.5 x 10.0	22.0 x 30.0	LE2E680TM3	064800	100
100	0.68	8.5 x 10.0	22.0 x 40.0	LE2E101TM4	064801	100
150	0.96	10.0 x 12.0	25.0 x 40.0	LE2E151TG4	064802	100
220	1.43	10.0 x 12.0	25.0 x 50.0	LE2E221TG5	064803	100
330	1.85	14.0 x 12.0	30.0 x 50.0	LE2E331TH5	064804	80
470	2.25	14.0 x 12.0	35.0 x 50.0	LE2E471TJ5	064805	50
680	3.05	14.0 x 12.0	35.0 x 63.0	LE2E681TJ6	064806	50
1000	3.85	14.0 x 12.0	35.0 x 80.0	LE2E102TJ8	064808	50
1500	4.96	14.0 x 12.0	40.0 x 100.0	LE2E152TK9	064809	50
315 Volt						
47	0.31	8.5 x 10.0	22.0 x 30.0	LE2F470TM3	064951	100
68	0.45	8.5 x 10.0	22.0 x 40.0	LE2F680TM4	064952	100
100	0.66	10.0 x 12.0	25.0 x 40.0	LE2F101TG4	064953	100
150	0.82	10.0 x 12.0	25.0 x 50.0	LE2F151TG5	064954	100
220	1.19	14.0 x 12.0	30.0 x 50.0	LE2F221TH5	064955	80
330	1.42	14.0 x 12.0	35.0 x 50.0	LE2F331TJ5	064956	50
470	2.13	14.0 x 12.0	35.0 x 63.0	LE2F471TJ6	064957	50
680	2.31	14.0 x 12.0	35.0 x 80.0	LE2F681TJ8	064958	50
1000	3.34	14.0 x 12.0	40.0 x 100.0	LE2F102TK9	064959	50
350 Volt						
47	0.35	8.5 x 10.0	22.0 x 30.0	LE2V470TM3	064941	100
68	0.52	8.5 x 10.0	22.0 x 40.0	LE2V680TM4	064942	100
100	0.71	10.0 x 12.0	25.0 x 40.0	LE2V101TG4	064943	100
150	0.95	10.0 x 12.0	25.0 x 50.0	LE2V151TG5	064944	100
220	1.37	14.0 x 12.0	30.0 x 50.0	LE2V221TH5	064945	80
330	1.66	14.0 x 12.0	35.0 x 50.0	LE2V331TJ5	064946	50
470	2.31	14.0 x 12.0	35.0 x 80.0	LE2V471TJ8	064947	50
680	2.58	14.0 x 12.0	35.0 x 100.0	LE2V681TJ9	064948	50
1000	3.66	14.0 x 12.0	40.0 x 100.0	LE2V102TK9	064949	50
400 Volt						
33	0.42	8.5 x 10.0	22.0 x 30.0	LE2G330TM3	064901	100
47	0.55	8.5 x 10.0	22.0 x 40.0	LE2G470TM4	064902	100
68	0.61	10.0 x 12.0	25.0 x 40.0	LE2G680TG4	064903	100
100	0.79	10.0 x 12.0	25.0 x 50.0	LE2G101TG5	064904	100
150	1.04	14.0 x 12.0	30.0 x 50.0	LE2G151TH5	064905	80
220	1.35	14.0 x 12.0	35.0 x 50.0	LE2G221TJ5	064906	50
330	1.79	14.0 x 12.0	35.0 x 63.0	LE2G331TJ6	064907	50
470	2.31	14.0 x 12.0	35.0 x 100	LE2G471TJ9	064908	50
680	3.16	14.0 x 12.0	40.0 x 100.0	LE2G681TK9	064909	50
450 Volt						
33	0.48	8.5 x 10.0	22.0 x 30.0	LE2W330TM3	064972	100
47	0.61	8.5 x 10.0	22.0 x 40.0	LE2W470TM4	064973	100
68	0.69	10.0 x 12.0	25.0 x 40.0	LE2W680TG4	064974	100
100	0.77	14.0 x 12.0	30.0 x 50.0	LE2W101TH5	064975	80
150	1.18	14.0 x 12.0	35.0 x 50.0	LE2W151TJ5	064976	50
220	1.43	14.0 x 12.0	35.0 x 63.0	LE2W221TJ6	064977	50
330	1.64	14.0 x 12.0	35.0 x 80.0	LE2W331TJ8	064978	50
470	2.11	14.0 x 12.0	40.0 x 100.0	LE2W471TK9	064979	50

NOVER type MS

The MS series of aluminium electrolytic capacitors has been specifically designed to offer high performance operation on AC motor loads. Fitted with 4mm lug terminals, the MS offers excellent endurance figures of between 30 - 75K applications and good surge/withstand voltage characteristics, making it especially suitable for use in compressor, water pump, air conditioning and other similar industries. The entire range of available values and voltages in loose format, are shown on the following pages.



- For AC motor loads
- High endurance **30 - 75K applications**
- Capacitance tolerance **0, +20%**
- High withstand voltage **1500Va.c**
- Body colour **Grey**

Specification

Capacitance tolerance 0, +20% at 120Hz, 20°C
 Operating temperature range -20°C to +70°C
 Power factor (25°C) 8% max.
 Withstand voltage 1500Va.c. for 1 minute
 between both terminals and holding clamp

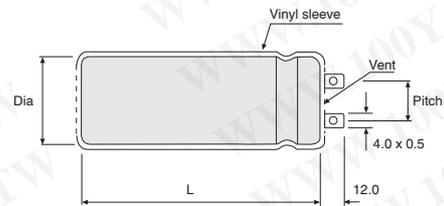
Endurance test

Rated voltage	
≤125Va.c.	Apply for 1 second and rest for 29 seconds. 2 cycles per minute at +70°C with power factor of 20% or less. Capacitance change within 25% of initial measured value after 75,000 applications.
≥160Va.c.	Apply for 1 second and rest for 59 seconds. 1 cycle per minute at +70°C with power factor of 20% or less. Capacitance change within 25% of initial measured value after 30,000 applications.

Surge voltage capability

Rated voltage	110V	125V	140V	160V	180V	a.c.
Surge voltage	132V	150V	168V	192V	216V	a.c.
Rated voltage	200V	220V	250V	280V	300V	a.c.
Surge voltage	240V	264V	300V	336V	360V	a.c.

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 1.0 to Dia and 2.0 to L

Other terminal types available to special order

**MS continued
overleaf > > >**

NOVER type MS

Value (μ F)	Pitch	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code
110 Volt				
40	10	25.0 x 40.0	MS11A400RA4	066001
50	10	25.0 x 50.0	MS11A500RA5	066002
63	10	25.0 x 50.0	MS11A630RA5	066003
80	10	25.0 x 60.0	MS11A800RA6	066004
100	10	25.0 x 60.0	MS11A101RA6	066005
125	10	30.0 x 60.0	MS11A125RRB6	066006
160	10	30.0 x 70.0	MS11A161RB7	066007
200	12	35.0 x 60.0	MS11A201RC6	066008
250	12	35.0 x 70.0	MS11A251RC7	066009
315	12	35.0 x 80.0	MS11A315RRC8	066010
400	12	35.0 x 100.0	MS11A401RC9	066011
500	16	40.0 x 100.0	MS11A501RD9	066012
125 Volt				
40	10	25.0 x 50.0	MS12B400RA5	066015
50	10	25.0 x 50.0	MS12B500RA5	066016
63	10	25.0 x 60.0	MS12B630RA6	066017
80	10	30.0 x 60.0	MS12B800RB6	066018
100	10	30.0 x 70.0	MS12B101RB7	066019
125	12	35.0 x 60.0	MS12B125RRC6	066020
160	12	35.0 x 70.0	MS12B161RC7	066021
200	12	35.0 x 80.0	MS12B201RC8	066022
250	12	35.0 x 100.0	MS12B251RC9	066023
315	16	40.0 x 100.0	MS12B315RRD9	066024
400	16	45.0 x 100.0	MS12B401RE9	066025
140 Volt				
40	10	25.0 x 60.0	MS14A400RA6	066028
50	10	25.0 x 60.0	MS14A500RA6	066029
63	10	30.0 x 60.0	MS14A630RB6	066030
80	10	30.0 x 70.0	MS14A800RB7	066031
100	12	35.0 x 60.0	MS14A101RC6	066032
125	12	35.0 x 70.0	MS14A125RRC7	066033
160	12	35.0 x 80.0	MS14A161RC8	066034
200	12	35.0 x 100.0	MS14A201RC9	066035
250	16	40.0 x 100.0	MS14A251RD9	066036
315	16	45.0 x 100.0	MS14A315RRE9	066037
160 Volt				
40	10	25.0 x 60.0	MS16A400RA6	066040
50	10	25.0 x 70.0	MS16A500RA7	066041
63	10	30.0 x 70.0	MS16A630RB7	066042
80	12	35.0 x 60.0	MS16A800RC6	066043
100	12	35.0 x 70.0	MS16A101RC7	066044
125	12	35.0 x 80.0	MS16A125RRC8	066045
160	12	35.0 x 100.0	MS16A161RC9	066046
200	16	40.0 x 100.0	MS16A201RD9	066047
250	16	45.0 x 100.0	MS16A251RE9	066048
180 Volt				
30	10	25.0 x 60.0	MS18A300RA6	066051
40	10	25.0 x 70.0	MS18A400RA7	066052
50	10	30.0 x 70.0	MS18A500RB7	066053
63	12	35.0 x 60.0	MS18A630RC6	066054
80	12	35.0 x 70.0	MS18A800RC7	066055
100	12	35.0 x 80.0	MS18A101RC8	066056
125	12	35.0 x 100.0	MS18A125RRC9	066057
160	16	40.0 x 100.0	MS18A161RD9	066058
200	16	45.0 x 100.0	MS18A201RE9	066059
200 Volt				
25	10	30.0 x 70.0	MS20A250RB7	066062
30	10	30.0 x 80.0	MS20A300RB8	066063
40	12	35.0 x 60.0	MS20A400RC6	066064
50	12	35.0 x 70.0	MS20A500RC7	066065
63	12	35.0 x 80.0	MS20A630RC8	066066
80	12	35.0 x 100.0	MS20A800RC9	066067
100	16	40.0 x 100.0	MS20A101RD9	066068
125	16	45.0 x 100.0	MS20A125RRE9	066069
160	20	51.0 x 100.0	MS20A161RF9	066070



MOTOR START

LUG

NOVER type MS (continued)

Value (μ F)	Pitch	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code
220 Volt				
25	10	30.0 x 80.0	MS22A250RB8	066073
30	12	35.0 x 60.0	MS22A300RC6	066074
40	12	35.0 x 70.0	MS22A400RC7	066075
50	12	35.0 x 80.0	MS22A500RC8	066076
63	12	35.0 x 100.0	MS22A630RC9	066077
80	16	40.0 x 100.0	MS22A800RD9	066078
100	16	45.0 x 100.0	MS22A101RE9	066079
125	20	51.0 x 100.0	MS22A125RRF9	066080
250 Volt				
25	12	35.0 x 60.0	MS25A250RC6	066083
30	12	35.0 x 70.0	MS25A300RC7	066084
40	12	35.0 x 80.0	MS25A400RC8	066085
50	12	35.0 x 100.0	MS25A500RC9	066086
63	16	40.0 x 100.0	MS25A630RD9	066087
80	16	45.0 x 100.0	MS25A800RE9	066088
100	20	51.0 x 100.0	MS25A101RF9	066089
280 Volt				
25	12	35.0 x 70.0	MS28A250RC7	066092
30	12	35.0 x 80.0	MS28A300RC8	066093
40	12	35.0 x 100.0	MS28A400RC9	066094
50	16	40.0 x 100.0	MS28A500RD9	066095
63	16	45.0 x 100.0	MS28A630RE9	066096
80	20	51.0 x 100.0	MS28A800RF9	066097
300 Volt				
25	12	35.0 x 80.0	MS30A250RC8	066100
30	12	35.0 x 100.0	MS30A300RC9	066101
40	16	40.0 x 100.0	MS30A400RD9	066102
50	16	45.0 x 100.0	MS30A500RE9	066103
63	16	45.0 x 100.0	MS30A630RE9	066104



NOVER type CE

Designed for use in a wide range of general industrial applications such as power supplies, inverters and computer equipment, the CE aluminium electrolytic capacitors offer high ripple current and excellent endurance. Fitted with quality M5 screw terminals, the CE series are supplied in numerous values and voltages in loose format, as shown on the following pages.



- **High ripple current**
- **Endurance** **2000 hours at 85°C**
- **Capacitance tolerance** **20%**
- **Body colour** **Black**

Specification

Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 Operating temperature range -40°C to +85°C (25 ~ 250V)
 -25°C to +85°C (350 ~ 450V)
 Leakage current ≤0.02CV after 5 minutes
 Dissipation factor (as listed) measured at 120Hz, 20°C

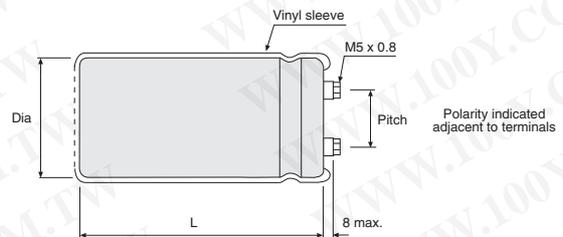
Surge voltage capability

Rated voltage	16V	25V	35V	50V	63V	80V	100V	d.c.
Surge voltage	20V	32V	44V	63V	79V	100V	125V	d.c.
Rated voltage	160V	200V	250V	350V	400V	450V	-	d.c.
Surge voltage	200V	250V	300V	400V	450V	500V	-	d.c.

Multiplier for ripple current

Frequency coefficient									
Rated Voltage(V)	Freq(Hz)	50	120	300	1K	3K	5K	10K	20K
25 ~ 50		0.95	1.0	1.04	1.10	1.12	1.13	1.15	1.15
63 ~ 100		0.95	1.0	1.06	1.16	1.20	1.25	1.30	1.33
160 ~ 200		0.90	1.0	1.10	1.20	1.35	1.40	1.50	1.55
250 ~ 450		0.80	1.0	1.10	1.20	1.35	1.40	1.50	1.55
Temperature coefficient									
Rated Voltage(V)	Temperature (°C)	40	55	70	85				
25 ~ 100		2.1	1.8	1.5	1.0				
160 ~ 450		2.6	2.2	1.7	1.0				

Dimensions (mm)



Dia x L are can sizes only. To allow for sleeve add 1.0 to Dia and 3.0 to L



GENERAL PURPOSE

SCREW

NOVER type CE

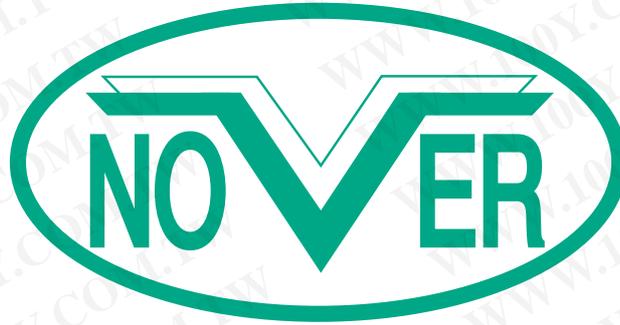
Value (μ F)	Ripple Current (A)	Dissipation Factor Tan δ (max)	Dimensions (mm)		Nover Part No.	Anglia
			Pitch	Dia. x L		Order Code
25 Volt						
47000	6.6	0.8	22	51.0 x 63.0	CE1E473MC6	065100
68000	7.9	0.8	22	51.0 x 63.0	CE1E683MC6	065101
82000	9.0	0.8	22	51.0 x 72.0	CE1E823MC7	065102
100000	10.3	0.8	22	51.0 x 80.0	CE1E104MC8	065103
150000	14.1	0.8	22	51.0 x 115.0	CE1E154MC11	065104
180000	15.7	0.8	22	51.0 x 120.0	CE1E184MC12	065105
220000	16.1	1.0	28	63.5 x 100.0	CE1E224MD10	065106
330000	21.9	1.0	28	63.5 x 140.0	CE1E334MD14	065107
470000	25.6	1.2	32	77.0 x 140.0	CE1E474ME14	065108
680000	32.5	1.2	32	89.0 x 140.0	CE1E684MF14	065109
35 Volt						
33000	6.4	0.6	22	51.0 x 63.0	CE1V333MC6	065120
47000	7.9	0.6	22	51.0 x 72.0	CE1V473MC7	065121
68000	9.8	0.6	22	51.0 x 80.0	CE1V683MC8	065122
82000	11.6	0.6	22	51.0 x 100.0	CE1V823MC10	065123
100000	13.3	0.6	22	51.0 x 115.0	CE1V104MC11	065124
150000	14.9	0.8	28	63.5 x 100.0	CE1V154MD10	065125
180000	17.0	0.8	28	63.5 x 115.0	CE1V184MD11	065126
180000	15.7	1.0	32	89.0 x 80.0	CE1V184MF8	065127
220000	20.0	0.8	28	63.5 x 140.0	CE1V224MD14	065128
270000	20.3	1.0	32	77.0 x 120.0	CE1V274ME12	065129
270000	20.4	1.0	32	89.0 x 100.0	CE1V274MF10	065130
330000	23.5	1.0	32	77.0 x 140.0	CE1V334ME14	065131
470000	29.6	1.0	32	89.0 x 140.0	CE1V474MF14	065132
50 Volt						
22000	6.3	0.5	22	51.0 x 63.0	CE1H223MC6	065140
33000	7.3	0.5	22	51.0 x 72.0	CE1H333MC7	065141
47000	9.3	0.5	22	51.0 x 90.0	CE1H473MC9	065142
68000	12.0	0.5	22	51.0 x 115.0	CE1H683MC11	065143
82000	13.7	0.5	22	51.0 x 130.0	CE1H823MC13	065144
100000	14.7	0.6	28	63.5 x 115.0	CE1H104MD11	065145
150000	19.3	0.6	32	77.0 x 115.0	CE1H154ME11	065146
180000	21.9	0.6	32	77.0 x 130.0	CE1H184ME13	065147
220000	21.4	0.8	32	89.0 x 115.0	CE1H224MF11	065148
63 Volt						
18000	5.8	0.4	22	51.0 x 63.0	CE1J183MC6	065160
22000	6.4	0.4	22	51.0 x 63.0	CE1J223MC6	065161
33000	8.4	0.4	22	51.0 x 80.0	CE1J333MC8	065162
47000	11.3	0.4	22	51.0 x 115.0	CE1J473MC11	065163
68000	12.7	0.5	28	63.5 x 100.0	CE1J683MD10	065164
82000	14.5	0.5	28	63.5 x 115.0	CE1J823MD11	065165
100000	16.7	0.5	28	63.5 x 130.0	CE1J104MD13	065166
150000	22.4	0.5	32	77.0 x 140.0	CE1J154ME14	065167
180000	22.4	0.6	32	89.0 x 115.0	CE1J184MF11	065168
220000	26.2	0.6	32	89.0 x 140.0	CE1J224MF14	065169
80 Volt						
15000	6.2	0.3	22	51.0 x 63.0	CE1K153MC6	065180
18000	7.0	0.3	22	51.0 x 72.0	CE1K183MC7	065181
22000	8.0	0.3	22	51.0 x 80.0	CE1K223MC8	065182
33000	10.5	0.3	22	51.0 x 100.0	CE1K333MC10	065183
47000	13.6	0.3	22	51.0 x 130.0	CE1K473MC13	065184
68000	15.4	0.4	28	63.5 x 130.0	CE1K683MD13	065185
82000	17.5	0.4	32	77.0 x 115.0	CE1K823ME11	065186
100000	20.5	0.4	32	77.0 x 140.0	CE1K104ME14	065187
150000	26.5	0.4	32	89.0 x 140.0	CE1K154MF14	065188
100 Volt						
10000	5.6	0.25	22	51.0 x 63.0	CE2A103MC6	065200
15000	7.0	0.25	22	51.0 x 80.0	CE2A153MC8	065201
18000	8.3	0.25	22	51.0 x 90.0	CE2A183MC9	065202
22000	10.0	0.25	22	51.0 x 115.0	CE2A223MC11	065203
33000	11.9	0.3	28	63.5 x 115.0	CE2A333MD11	065204
47000	14.2	0.35	32	77.0 x 115.0	CE2A473ME11	065205
68000	18.8	0.35	32	77.0 x 160.0	CE2A683ME16	065206
82000	20.5	0.35	32	89.0 x 130.0	CE2A823MF13	065207
100000	24.0	0.35	32	89.0 x 160.0	CE2A104MF16	065208

CE continued overleaf > > >



NOVER type CE (continued)

Value (μ F)	Ripple Current (A)	Dissipation Factor Tan δ (max)	Pitch	Dimensions (mm) Dia. x L	Nover Part No.	Anglia Order Code
160 Volt						
3300	4.2	0.25	22	51.0 x 63.0	CE2C332MC6	065220
4700	5.2	0.25	22	51.0 x 72.0	CE2C472MC7	065221
6800	6.7	0.25	22	51.0 x 90.0	CE2C682MC9	065222
8200	7.6	0.25	22	51.0 x 100.0	CE2C822MC10	065223
10000	8.8	0.25	22	51.0 x 115.0	CE2C103MC11	065224
15000	11.6	0.25	28	63.5 x 115.0	CE2C153MD11	065225
18000	13.2	0.25	28	63.5 x 130.0	CE2C183MD13	065226
22000	14.5	0.25	32	77.0 x 115.0	CE2C223ME11	065227
33000	19.4	0.25	32	89.0 x 130.0	CE2C333MF13	065228
200 Volt						
2200	3.5	0.25	22	51.0 x 63.0	CE2D222MC6	065240
3300	4.5	0.25	22	51.0 x 72.0	CE2D332MC7	065241
4700	5.7	0.25	22	51.0 x 90.0	CE2D472MC9	065242
6800	7.4	0.25	22	51.0 x 115.0	CE2D682MC11	065243
8200	8.4	0.25	22	51.0 x 130.0	CE2D822MC13	065244
10000	9.8	0.25	28	63.5 x 115.0	CE2D103MD11	065245
15000	12.3	0.25	32	77.0 x 115.0	CE2D153ME11	065246
22000	15.3	0.25	32	89.0 x 115.0	CE2D223MF11	065247
250 Volt						
1500	3.3	0.2	22	51.0 x 63.0	CE2E152MC6	065260
2200	4.7	0.2	22	51.0 x 72.0	CE2E222MC7	065261
3300	6.1	0.2	22	51.0 x 90.0	CE2E332MC9	065262
4700	7.9	0.2	22	51.0 x 115.0	CE2E472MC11	065263
6800	10.5	0.2	28	63.5 x 115.0	CE2E682MD11	065264
8200	12.0	0.2	28	63.5 x 130.0	CE2E822MD13	065265
10000	13.5	0.2	28	63.5 x 140.0	CE2E103MD14	065266
15000	16.6	0.2	32	77.0 x 140.0	CE2E153ME14	065267
18000	18.5	0.2	32	89.0 x 130.0	CE2E183MF13	065268
22000	21.7	0.2	32	89.0 x 160.0	CE2E223MF16	065269
350 Volt						
1000	3.5	0.2	22	51.0 x 63.0	CE2V102MC6	065280
1500	4.5	0.2	22	51.0 x 72.0	CE2V152MC7	065281
2200	5.8	0.2	22	51.0 x 90.0	CE2V222MC9	065282
3300	7.7	0.2	22	51.0 x 115.0	CE2V332MC11	065283
4700	10.1	0.2	28	63.5 x 115.0	CE2V472MD11	065284
6800	13.1	0.2	32	77.0 x 115.0	CE2V682ME11	065285
8200	15.2	0.2	32	77.0 x 140.0	CE2V822ME14	065286
10000	16.8	0.2	32	89.0 x 115.0	CE2V103MF11	065287
400 Volt						
820	3.2	0.2	22	51.0 x 63.0	CE2G821MC6	065300
1000	3.5	0.2	22	51.0 x 63.0	CE2G102MC6	065301
1500	4.6	0.2	22	51.0 x 80.0	CE2G152MC8	065302
1800	5.3	0.2	22	51.0 x 90.0	CE2G182MC9	065303
2200	6.0	0.2	22	51.0 x 100.0	CE2G222MC10	065304
3300	8.1	0.2	28	63.5 x 100.0	CE2G332MD10	065305
4700	10.5	0.2	28	63.5 x 130.0	CE2G472MD13	065306
6800	13.8	0.2	32	77.0 x 140.0	CE2G682ME14	065307
8200	15.2	0.2	32	89.0 x 115.0	CE2G822MF11	065308
10000	17.7	0.2	32	89.0 x 140.0	CE2G103MF14	065309
450 Volt						
680	2.8	0.25	22	51.0 x 63.0	CE2W681MC6	065320
820	3.2	0.25	22	51.0 x 72.0	CE2W821MC7	065321
1000	3.6	0.25	22	51.0 x 72.0	CE2W102MC7	065322
1500	4.7	0.25	22	51.0 x 90.0	CE2W152MC9	065323
2200	6.3	0.25	22	51.0 x 130.0	CE2W222MC13	065324
3300	8.2	0.25	28	63.5 x 115.0	CE2W332MD11	065325
4700	10.9	0.25	32	77.0 x 130.0	CE2W472ME13	065326
6800	13.4	0.25	32	89.0 x 115.0	CE2W682MF11	065327
8200	15.6	0.25	32	89.0 x 140.0	CE2W822MF14	065328

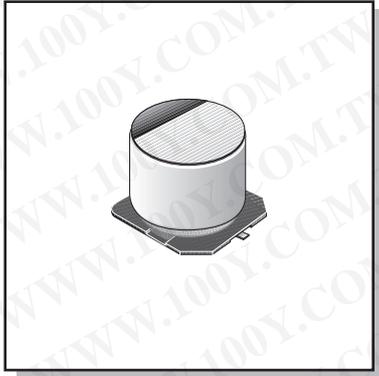


This section details the various ranges of surface mount electrolytics.

Type	Description	Page
VE	General Purpose – standard range	56-57A
VH	General Purpose, 105°C – high temperature	58-59A
VL	Long Life, 105°C – high temperature	59B-59C
VA	125°C – very high temperature	59D-59E
VZ	Low ESR, 105°C – high temperature	60-61
VX	Very Low ESR, 105°C – high temperature	61A-61B
VP	Bi-Polar – non-polarised	62-63

NOVER type VE

Surface mount, aluminium electrolytic capacitors giving an excellent operational specification within a small package and designed for general purpose use. The VE series has an endurance test of 2000 hours at 85°C and is available in a wide range of values and voltages, which are shown on the following pages. Supplied taped and reeled.



- ◆ **Standard range**
- ◆ **Endurance** **2000 hours at 85°C**
- ◆ **Excellent performance/size characteristics**
- ◆ **Ideal for general purpose use**
- ◆ **Suitable for wave & reflow soldering**
- ◆ **Capacitance tolerance** **20%**
- ◆ **Leakage current** **≤0.01CV**
- ◆ **Supplied taped & reeled**

Specification

Endurance test 2000 hours at 85°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 85°C
 Operating temperature range -40°C to +85°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

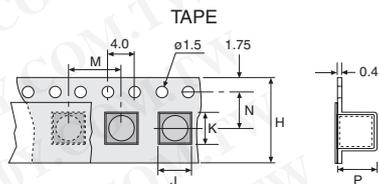
Dissipation factor/Tan δ (max.) at 120Hz, 20°C

Rated voltage (d.c.)	4V	6.3V	10V	16V	25V	35V	50V	63V	100V
Case size 3.0 x 5.3	0.42	0.30	0.24	0.22	0.16	0.14	0.12	—	—
Case size 6.3 x 7.7	0.42	0.42	0.32	0.26	0.18	0.14	0.12	—	—
All other case sizes	0.42	0.28	0.24	0.20	0.14	0.12	0.10	0.10	0.10

Marking

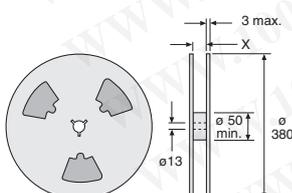
Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.
 Capacitance value
 Voltage
 Bar to indicate negative terminal

Packaging



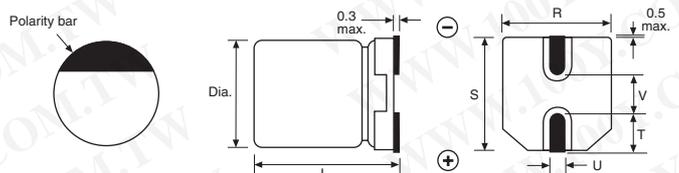
Case Size	H	J	K	M	N	P
3.0 x 5.3	12.0	3.4	3.4	8.0	5.5	5.9
4.0 x 5.3	12.0	5.0	5.0	8.0	5.5	5.8
5.0 x 5.3	12.0	6.0	6.0	12.0	5.5	5.8
6.3 x 5.3	16.0	7.0	7.0	12.0	7.5	5.8
6.3 x 7.7	16.0	7.0	7.0	12.0	7.5	8.4
8.0 x 6.5	16.0	8.7	8.7	12.0	7.5	6.8
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
3.0 x 5.3	14	2000pcs
4.0 x 5.3	14	2000pcs
5.0 x 5.3	14	1000pcs
6.3 x 5.3	18	1000pcs
6.3 x 7.7	18	1000pcs
8.0 x 6.5	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
3.0 x 5.3	3.0	5.3	3.3	3.3	1.5	0.6	0.8
4.0 x 5.3	4.0	5.3	4.3	4.3	2.0	0.65	1.0
5.0 x 5.3	5.0	5.3	5.3	5.3	2.3	0.65	1.5
6.3 x 5.3	6.3	5.3	6.6	6.6	2.7	0.65	2.0
6.3 x 7.7	6.3	7.7	6.6	6.6	2.7	0.65	2.0
8.0 x 6.5	8.0	6.5	8.4	8.4	3.4	0.65	2.3
8.0 x 10.0	8.0	10.0	8.4	8.4	3.0	0.9	3.1
10.0 x 10.0	10.0	10.0	10.4	10.4	3.3	0.9	4.7



NOVER type VE

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
4 Volt					
22	14	3.0 x 5.3	VE0G220MG1R	VG220	2000
33	26	4.0 x 5.3	VE0G330MF1R	VG330	2000
47	34	4.0 x 5.3	VE0G470MF1R	VG470	2000
100	61	5.0 x 5.3	VE0G101MF2R	VG101	1000
220	95	6.3 x 5.3	VE0G221MF3R	VG221	1000
330	102	6.3 x 7.7	VE0G331MMR	VG331	1000
470	150	6.3 x 7.7	VE0G471MMR	VG471	1000
6.3 Volt					
22	31	4.0 x 5.3	VE0J220MF1R	VJ220	2000
33	39	5.0 x 5.3	VE0J330MF2R	VJ330	1000
47	47	5.0 x 5.3	VE0J470MF2R	VJ470	1000
100	71	6.3 x 5.3	VE0J101MF3R	VJ101	1000
220	95	6.3 x 7.7	VE0J221MMR	VJ221	1000
220	155	8.0 x 6.5	VE0J221MG2R	VJ229	1000
330	150	6.3 x 7.7	VE0J331MMR	VJ331	1000
330	155	8.0 x 6.5	VE0J331MG2R	VJ339	1000
470	300	8.0 x 10.0	VE0J471MF4R	VJ471	500
1000	458	10.0 x 10.0	VE0J102MF5R	VJ102	500
10 Volt					
10	23	4.0 x 5.3	VE1A100MF1R	VA100	2000
22	35	5.0 x 5.3	VE1A220MF2R	VA220	1000
33	43	5.0 x 5.3	VE1A330MF2R	VA330	1000
47	59	6.3 x 5.3	VE1A470MF3R	VA470	1000
100	76	6.3 x 5.3	VE1A101MF3R	VA101	1000
220	150	6.3 x 7.7	VE1A221MMR	VA221	1000
220	155	8.0 x 6.5	VE1A221MG2R	VA229	1000
330	280	8.0 x 10.0	VE1A331MF4R	VA331	500
470	360	8.0 x 10.0	VE1A471MF4R	VA471	500
16 Volt					
10	18	3.0 x 5.3	VE1C100MG1R	VC109	2000
10	25	4.0 x 5.3	VE1C100MF1R	VC100	2000
22	39	5.0 x 5.3	VE1C220MF2R	VC220	1000
33	57	6.3 x 5.3	VE1C330MF3R	VC330	1000
47	68	6.3 x 5.3	VE1C470MF3R	VC470	1000
100	86	6.3 x 5.3	VE1C101MF3R	VC101	1000
220	150	6.3 x 7.7	VE1C221MMR	VC221	1000
330	280	8.0 x 10.0	VE1C331MF4R	VC331	500
470	458	10.0 x 10.0	VE1C471MF5R	VC471	500
25 Volt					
4.7	11	3.0 x 5.3	VE1E4R7MG1R	VE478	2000
4.7	19	4.0 x 5.3	VE1E4R7MF1R	VE4R7	2000
10	28	5.0 x 5.3	VE1E100MF2R	VE100	1000
22	52	6.3 x 5.3	VE1E220MF3R	VE220	1000
33	63	6.3 x 5.3	VE1E330MF3R	VE330	1000
47	68	6.3 x 5.3	VE1E470MF3R	VE470	1000
100	130	6.3 x 7.7	VE1E101MMR	VE101	1000
100	155	8.0 x 6.5	VE1E101MG2R	VE109	1000
220	250	8.0 x 10.0	VE1E221MF4R	VE221	500
330	458	10.0 x 10.0	VE1E331MF5R	VE331	500

VE continued overleaf > > >

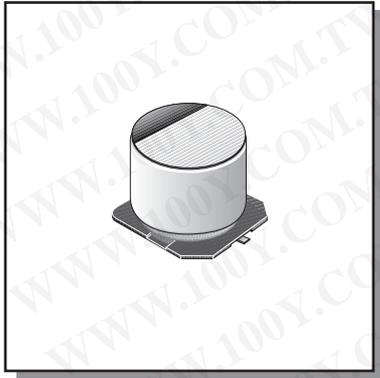


NOVER type VE (continued)

Value (μ F)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
35 Volt					
2.2	8	3.0 x 5.3	VE1V2R2MG1R	VX2R2	2000
3.3	9	3.0 x 5.3	VE1V3R3MG1R	VX3R3	2000
4.7	20	4.0 x 5.3	VE1V4R7MF1R	VX4R7	2000
10	30	5.0 x 5.3	VE1V100MF2R	VX100	1000
22	54	6.3 x 5.3	VE1V220MF3R	VX220	1000
33	60	6.3 x 5.3	VE1V330MF3R	VX330	1000
47	70	6.3 x 5.3	VE1V470MF3R	VX470	1000
47	155	8.0 x 6.5	VE1V470MG2R	VX479	1000
100	252	8.0 x 10.0	VE1V101MF4R	VX109	500
220	458	10.0 x 10.0	VE1V221MF5R	VX221	500
50 Volt					
0.1	1	3.0 x 5.3	VE1H0R1MG1R	VH018	2000
0.1	1	4.0 x 5.3	VE1H0R1MF1R	VH0R1	2000
0.22	2	3.0 x 5.3	VE1HR22MG1R	VH228	2000
0.22	2.3	4.0 x 5.3	VE1HR22MF1R	VHR22	2000
0.33	3	3.0 x 5.3	VE1HR33MG1R	VH338	2000
0.33	3.5	4.0 x 5.3	VE1HR33MF1R	VHR33	2000
0.47	4	3.0 x 5.3	VE1HR47MG1R	VH478	2000
0.47	5	4.0 x 5.3	VE1HR47MF1R	VHR47	2000
1.0	6	3.0 x 5.3	VE1H1R0MG1R	VH108	2000
1.0	10	4.0 x 5.3	VE1H1R0MF1R	VH1R0	2000
2.2	15	4.0 x 5.3	VE1H2R2MF1R	VH2R2	2000
3.3	18	4.0 x 5.3	VE1H3R3MF1R	VH3R3	2000
4.7	23	5.0 x 5.3	VE1H4R7MF2R	VH4R7	1000
10	34	6.3 x 5.3	VE1H100MF3R	VH100	1000
22	45	6.3 x 5.3	VE1H220MF3R	VH220	1000
33	85	6.3 x 7.7	VE1H330MMR	VH330	1000
33	155	8.0 x 6.5	VE1H330MG2R	VH339	1000
47	90	6.3 x 7.7	VE1H470MMR	VH470	1000
100	200	8.0 x 10.0	VE1H101MF4R	VH101	500
63 Volt					
22	139	8.0 x 10.0	VE1J220MF4R	VF220	500
33	139	8.0 x 10.0	VE1J330MF4R	VF330	500
47	226	10.0 x 10.0	VE1J470MF5R	VF470	500
100 Volt					
10	94	8.0 x 10.0	VE2A100MF4R	VT100	500
22	189	10.0 x 10.0	VE2A220MF5R	VT220	500
33	189	10.0 x 10.0	VE2A330MF5R	VT330	500

NOVER type VH

Surface mount, aluminium electrolytic capacitors with an extended upper temperature limit of 105°C. The VH series has an endurance test of 2000 hours at 105°C and is available in a wide range of values and voltages, which are shown on the following pages. Supplied taped and reeled.



- ◆ High temperature
- ◆ Endurance **2000 hours at 105°C**
- ◆ Excellent performance/size characteristics
- ◆ Designed for higher ambient conditions
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **20%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

Endurance test 2000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 105°C
 Operating temperature range -55°C to +105°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor/Tan δ (max.) at 120Hz, 20°C

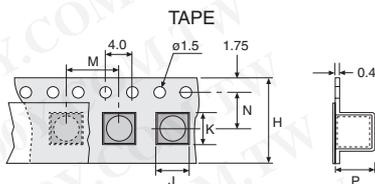
Rated voltage (d.c.)	4V	6.3V	10V	16V	25V	35V	50V	63V	100V
All case sizes	0.37	0.30	0.26	0.22	0.17	0.14	0.13	0.11	0.10

Marking

Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.

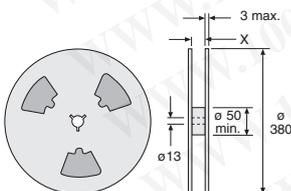
Capacitance value
 Voltage
 Bar to indicate negative terminal

Packaging



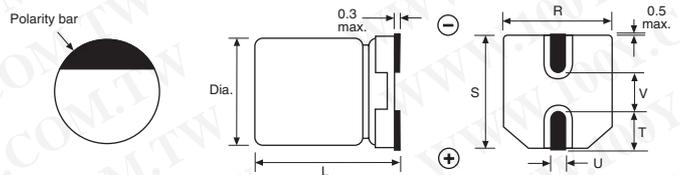
Case Size	H	J	K	M	N	P
4.0 x 5.8	12.0	5.0	5.0	8.0	5.5	6.3
5.0 x 5.8	12.0	6.0	6.0	12.0	5.5	6.3
6.3 x 5.8	16.0	7.0	7.0	12.0	7.5	6.3
8.0 x 6.5	16.0	8.7	8.7	12.0	7.5	6.8
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
4.0 x 5.8	14	2000pcs
5.0 x 5.8	14	1000pcs
6.3 x 5.8	18	1000pcs
8.0 x 6.5	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
4.0 x 5.8	4.0	5.8	4.3	4.3	2.0	0.65	1.0
5.0 x 5.8	5.0	5.8	5.3	5.3	2.3	0.65	1.5
6.3 x 5.8	6.3	5.8	6.6	6.6	2.7	0.65	2.0
8.0 x 6.5	8.0	6.5	8.4	8.4	3.4	0.65	2.3
8.0 x 10.0	8.0	10.0	8.4	8.4	3.0	0.9	3.1
10.0 x 10.0	10.0	10.0	10.4	10.4	3.3	0.9	4.7



NOVER type VH

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
4 Volt					
22	22	4.0 x 5.8	VH0G220MF6R	ZP220	2000
33	27	5.0 x 5.8	VH0G330MF7R	ZP330	1000
47	33	5.0 x 5.8	VH0G470MF7R	ZP470	1000
100	50	6.3 x 5.8	VH0G101MF8R	ZP101	1000
6.3 Volt					
22	22	4.0 x 5.8	VH0J220MF6R	ZN220	2000
33	27	5.0 x 5.8	VH0J330MF7R	ZN330	1000
47	33	5.0 x 5.8	VH0J470MF7R	ZN470	1000
100	100	6.3 x 5.8	VH0J101MF8R	ZN101	1000
220	178	8.0 x 10.0	VH0J221MF4R	ZN221	500
330	178	8.0 x 10.0	VH0J331MF4R	ZN331	500
470	324	10.0 x 10.0	VH0J471MF5R	ZN471	500
1000	335	10.0 x 10.0	VH0J102MF5R	ZN102	500
10 Volt					
22	25	5.0 x 5.8	VH1A220MF7R	ZL220	1000
33	30	5.0 x 5.8	VH1A330MF7R	ZL330	1000
47	43	6.3 x 5.8	VH1A470MF8R	ZL470	1000
100	110	8.0 x 6.5	VH1A101MG2R	ZL101	1000
220	178	8.0 x 10.0	VH1A221MF4R	ZL221	500
330	324	10.0 x 10.0	VH1A331MF5R	ZL331	500
470	324	10.0 x 10.0	VH1A471MF5R	ZL471	500
16 Volt					
10	16	4.0 x 5.8	VH1C100MF6R	ZK100	2000
22	30	5.0 x 5.8	VH1C220MF7R	ZK220	1000
33	40	6.3 x 5.8	VH1C330MF8R	ZK330	1000
47	50	6.3 x 5.8	VH1C470MF8R	ZK470	1000
100	110	8.0 x 6.5	VH1C101MG2R	ZK101	1000
220	324	10.0 x 10.0	VH1C221MF5R	ZK221	500
330	324	10.0 x 10.0	VH1C331MF5R	ZK331	500
470	324	10.0 x 10.0	VH1C471MF5R	ZK471	500
25 Volt					
4.7	13	4.0 x 5.8	VH1E4R7MF6R	ZW4R7	2000
10	23	5.0 x 5.8	VH1E100MF7R	ZW100	1000
22	38	6.3 x 5.8	VH1E220MF8R	ZW220	1000
33	48	6.3 x 5.8	VH1E330MF8R	ZW330	1000
47	110	8.0 x 6.5	VH1E470MG2R	ZW470	1000
100	178	8.0 x 10.0	VH1E101MF4R	ZW101	500
220	324	10.0 x 10.0	VH1E221MF5R	ZW221	500
330	324	10.0 x 10.0	VH1E331MF5R	ZW331	500
35 Volt					
4.7	15	4.0 x 5.8	VH1V4R7MF6R	ZR4R7	2000
10	25	5.0 x 5.8	VH1V100MF7R	ZR100	1000
22	50	6.3 x 5.8	VH1V220MF8R	ZR220	1000
33	110	8.0 x 6.5	VH1V330MG2R	ZR330	1000
47	178	8.0 x 10.0	VH1V470MF4R	ZR470	500
100	324	10.0 x 10.0	VH1V101MF5R	ZR101	500
220	324	10.0 x 10.0	VH1V221MF5R	ZR221	500

VH continued overleaf > > >

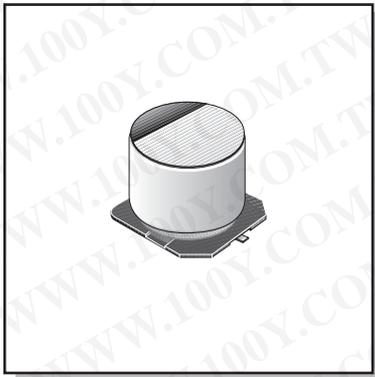


NOVER type VH (continued)

Value (μ F)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
50 Volt					
0.1	2	4.0 x 5.8	VH1H0R1MF6R	ZB0R1	2000
0.22	3	4.0 x 5.8	VH1HR22MF6R	ZBR22	2000
0.33	4	4.0 x 5.8	VH1HR33MF6R	ZBR33	2000
0.47	5	4.0 x 5.8	VH1HR47MF6R	ZBR47	2000
1.0	10	4.0 x 5.8	VH1H1R0MF6R	ZB1R0	2000
2.2	16	4.0 x 5.8	VH1H2R2MF6R	ZB2R2	2000
3.3	18	4.0 x 5.8	VH1H3R3MF6R	ZB3R3	2000
4.7	22	5.0 x 5.8	VH1H4R7MF7R	ZB4R7	1000
10	30	6.3 x 5.8	VH1H100MF8R	ZB100	1000
22	110	8.0 x 6.5	VH1H220MG2R	ZB220	1000
33	178	8.0 x 10.0	VH1H330MF4R	ZB330	500
47	178	8.0 x 10.0	VH1H470MF4R	ZB470	500
100	324	10.0 x 10.0	VH1H101MF5R	ZB101	500
63 Volt					
22	99	8.0 x 10.0	VH1J220MF4R	ZF220	500
33	160	10.0 x 10.0	VH1J330MF5R	ZF330	500
47	160	10.0 x 10.0	VH1J470MF5R	ZF470	500
100 Volt					
10	67	8.0 x 10.0	VH2A100MF4R	ZT100	500
22	133	10.0 x 10.0	VH2A220MF5R	ZT220	500

NOVER type VL

Surface mount, aluminium electrolytic capacitors offering long life together with an extended upper temperature limit of 105°C. The VL series has an endurance test of 5000 hours at 105°C and is available in a wide range of values and voltages, which are shown on the following page. Supplied taped and reeled.



- ◆ High temperature, long life
- ◆ Endurance **5000 hours at 105°C**
- ◆ Excellent performance/size characteristics
- ◆ For sustained operation in higher ambients
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **20%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

Endurance test 5000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 105°C
 Operating temperature range -40°C to +105°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor/Tan δ (max.) at 120Hz, 20°C

Rated voltage (d.c.)	4V	6.3V	10V	16V	25V	35V	50V
All case sizes	0.37	0.28	0.24	0.20	0.16	0.13	0.12

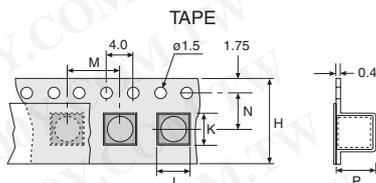
Marking

Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.

Capacitance value
 Voltage

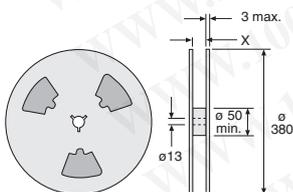
Bar to indicate negative terminal

Packaging



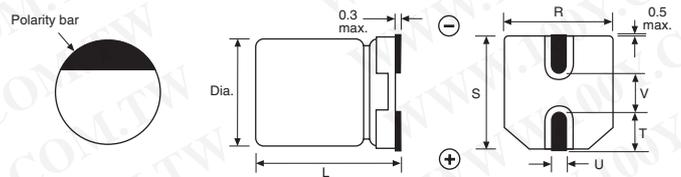
Case Size	H	J	K	M	N	P
4.0 x 5.8	12.0	5.0	5.0	8.0	5.5	6.3
5.0 x 5.8	12.0	6.0	6.0	12.0	5.5	6.3
6.3 x 5.8	16.0	7.0	7.0	12.0	7.5	6.3
6.3 x 7.7	16.0	7.0	7.0	12.0	7.5	8.4
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
4.0 x 5.8	14	2000pcs
5.0 x 5.8	14	1000pcs
6.3 x 5.8	18	1000pcs
6.3 x 7.7	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
4.0 x 5.8	4.0	5.8	4.3	4.3	1.8	0.65	1.0
5.0 x 5.8	5.0	5.8	5.3	5.3	2.1	0.65	1.3
6.3 x 5.8	6.3	5.8	6.6	6.6	2.4	0.65	2.2
6.3 x 7.7	6.3	7.7	6.6	6.6	2.4	0.65	2.2
8.0 x 10.0	8.0	10.0	8.3	8.3	2.9	0.95	3.1
10.0 x 10.0	10.0	10.0	10.3	10.3	3.2	0.95	4.5



LONG LIFE, 105°C

SURFACE MOUNT

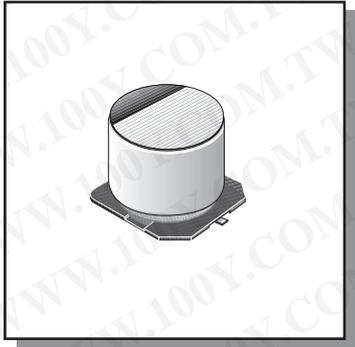
NOVER type VL

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
4 Volt					
22	22	4.0 x 5.8	VLOG220MF6R	EP220	2000
33	30	5.0 x 5.8	VLOG330MF7R	EP330	1000
47	36	5.0 x 5.8	VLOG470MF7R	EP470	1000
100	60	6.3 x 5.8	VLOG101MF8R	EP101	1000
220	60	6.3 x 7.7	VLOG221MF9R	EP221	1000
330	140	8.0 x 10.0	VLOG331MF4R	EP331	500
470	140	8.0 x 10.0	VLOG471MF4R	EP471	500
1000	315	10.0 x 10.0	VLOG102MF5R	EP102	500
6.3 Volt					
22	22	4.0 x 5.8	VL0J220MF6R	EN220	2000
33	30	5.0 x 5.8	VL0J330MF7R	EN330	1000
47	36	5.0 x 5.8	VL0J470MF7R	EN470	1000
100	60	6.3 x 5.8	VL0J101MF8R	EN101	1000
220	140	8.0 x 10.0	VL0J221MF4R	EN221	500
330	140	8.0 x 10.0	VL0J331MF4R	EN331	500
470	315	10.0 x 10.0	VL0J471MF5R	EN471	500
10 Volt					
22	27	5.0 x 5.8	VL1A220MF7R	EL220	1000
33	35	5.0 x 5.8	VL1A330MF7R	EL330	1000
47	46	6.3 x 5.8	VL1A470MF8R	EL470	1000
100	60	6.3 x 7.7	VL1A101MF9R	EL101	1000
220	140	8.0 x 10.0	VL1A221MF4R	EL221	500
330	315	10.0 x 10.0	VL1A331MF5R	EL331	500
470	315	10.0 x 10.0	VL1A471MF5R	EL471	500
16 Volt					
10	18	4.0 x 5.8	VL1C100MF6R	EK100	2000
22	30	5.0 x 5.8	VL1C220MF7R	EK220	1000
33	40	6.3 x 5.8	VL1C330MF8R	EK330	1000
47	50	6.3 x 5.8	VL1C470MF8R	EK470	1000
100	60	6.3 x 7.7	VL1C101MF9R	EK101	1000
220	315	10.0 x 10.0	VL1C221MF5R	EK221	500
330	315	10.0 x 10.0	VL1C331MF5R	EK331	500
25 Volt					
4.7	13	4.0 x 5.8	VL1E4R7MF6R	EE4R7	2000
10	23	5.0 x 5.8	VL1E100MF7R	EE100	1000
22	38	6.3 x 5.8	VL1E220MF8R	EE220	1000
33	48	6.3 x 5.8	VL1E330MF8R	EE330	1000
47	60	6.3 x 7.7	VL1E470MF9R	EE470	1000
100	140	8.0 x 10.0	VL1E101MF4R	EE101	500
220	315	10.0 x 10.0	VL1E221MF5R	EE221	500
35 Volt					
4.7	15	4.0 x 5.8	VL1V4R7MF6R	ER4R7	2000
10	25	5.0 x 5.8	VL1V100MF7R	ER100	1000
22	42	6.3 x 5.8	VL1V220MF8R	ER220	1000
33	60	6.3 x 7.7	VL1V330MF9R	ER330	1000
47	140	8.0 x 10.0	VL1V470MF4R	ER470	500
100	315	10.0 x 10.0	VL1V101MF5R	ER101	500
50 Volt					
0.1	1	4.0 x 5.8	VL1H0R1MF6R	ES0R1	2000
0.22	2.6	4.0 x 5.8	VL1HR22MF6R	ESR22	2000
0.33	3.2	4.0 x 5.8	VL1HR33MF6R	ESR33	2000
0.47	3.8	4.0 x 5.8	VL1HR47MF6R	ESR47	2000
1.0	6.2	4.0 x 5.8	VL1H1R0MF6R	ES1R0	2000
2.2	11	4.0 x 5.8	VL1H2R2MF6R	ES2R2	2000
3.3	14	4.0 x 5.8	VL1H3R3MF6R	ES3R3	2000
4.7	19	5.0 x 5.8	VL1H4R7MF7R	ES4R7	1000
10	30	6.3 x 5.8	VL1H100MF8R	ES100	1000
22	60	6.3 x 7.7	VL1H220MF9R	ES220	1000
33	140	8.0 x 10.0	VL1H330MF4R	ES330	500
47	315	10.0 x 10.0	VL1H470MF5R	ES470	500
100	315	10.0 x 10.0	VL1H101MF5R	ES101	500



NOVER type VA

Surface mount, aluminium electrolytic capacitors with an upper temperature limit extended to 125°C to sustain performance in harsher environments. The VA series has an endurance test of 1000 hours at 125°C and is available in a range of values and voltages, which are shown on the following page. Supplied taped and reeled.



- ◆ Very high temperature
- ◆ Endurance **1000 hours at 125°C**
- ◆ Excellent performance/size characteristics
- ◆ Ideal for harsh environments
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **20%**
- ◆ Leakage current **≤0.03CV**
- ◆ Supplied taped & reeled

Specification

Endurance test 1000 hours at 125°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 120Hz, 125°C
 Operating temperature range -40°C to +125°C
 Leakage current ≤0.03CV or 4µA
 (whichever is greater) after 1 min.

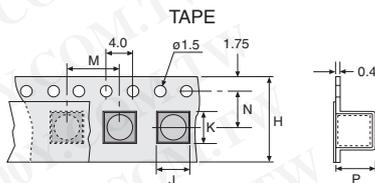
Dissipation factor/Tan δ (max.) at 120Hz, 20°C

Rated voltage (d.c.)	10V	16V	25V	35V	50V
All case sizes	0.32	0.24	0.21	0.18	0.18

Marking

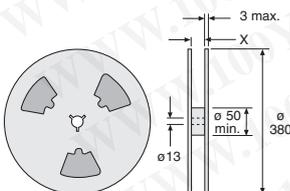
Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.
 Capacitance value
 Voltage
 Bar to indicate negative terminal

Packaging



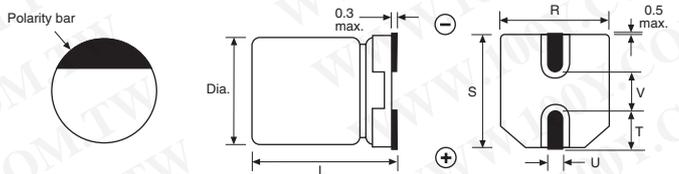
Case Size	H	J	K	M	N	P
6.3 x 7.7	16.0	7.0	7.0	12.0	7.5	8.4
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
6.3 x 7.7	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
6.3 x 7.7	6.3	7.7	6.6	6.6	2.4	0.65	2.2
8.0 x 10.0	8.0	10.0	8.3	8.3	2.9	0.95	3.1
10.0 x 10.0	10.0	10.0	10.3	10.3	3.2	0.95	4.5



125°C

SURFACE MOUNT

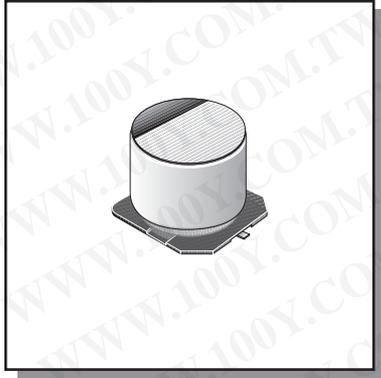
NOVER type VA

Value (µF)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
10 Volt					
100	58	6.3 x 7.7	VA1A101MF9R	EB101	1000
220	90	8.0 x 10.0	VA1A221MF4R	EB221	500
330	112	10.0 x 10.0	VA1A331MF5R	EB331	500
16 Volt					
100	66	8.0 x 10.0	VA1C101MF4R	EC101	500
220	102	10.0 x 10.0	VA1C221MF5R	EC221	500
25 Volt					
47	48	6.3 x 7.7	VA1E470MF9R	EH470	1000
100	74	8.0 x 10.0	VA1E101MF4R	EH101	500
220	116	10.0 x 10.0	VA1E221MF5R	EH221	500
35 Volt					
33	44	6.3 x 7.7	VA1V330MF9R	ET330	1000
47	52	8.0 x 10.0	VA1V470MF4R	ET470	500
100	80	10.0 x 10.0	VA1V101MF5R	ET101	500
50 Volt					
10	24	6.3 x 7.7	VA1H100MF9R	EW100	1000
22	38	6.3 x 7.7	VA1H220MF9R	EW220	1000
33	46	8.0 x 10.0	VA1H330MF4R	EW330	500
47	58	10.0 x 10.0	VA1H470MF5R	EW470	500



NOVER type VZ

Surface mount, aluminium electrolytic capacitors combining low impedance and ESR characteristics within a small package. The VZ series additionally feature a maximum operational temperature specification of 105°C making them especially suitable for switch mode power supplies (SMPS). Available in a wide range of values and voltages, which are shown on the following page. Supplied taped and reeled.



- ◆ **Low impedance**
- ◆ **Endurance** **2000 hours at 105°C**
- ◆ **Excellent performance/size characteristics**
- ◆ **For switch mode power supplies (SMPS) and industrial electronics**
- ◆ **Suitable for wave & reflow soldering**
- ◆ **Capacitance tolerance** **20%**
- ◆ **Leakage current** **≤0.01CV**
- ◆ **Supplied taped & reeled**

Specification

Endurance test 2000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 100kHz, 105°C
 Impedance (as listed) measured at 100kHz, 20°C
 Operating temperature range -55°C to +105°C
 Leakage current ≤0.01CV or 3µA (whichever is greater) after 2 min.

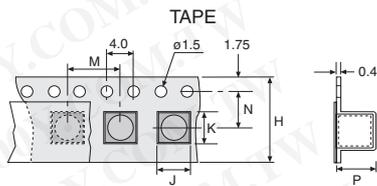
Dissipation factor/Tan δ (max.) at 120Hz, 20°C

Rated voltage (d.c.)	6.3V	10V	16V	25V	35V	50V
All case sizes	0.22	0.19	0.16	0.14	0.12	0.12

Marking

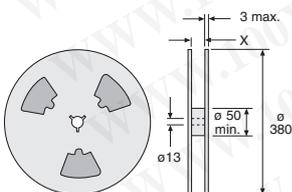
Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.
 Capacitance value
 Voltage
 Bar to indicate negative terminal

Packaging



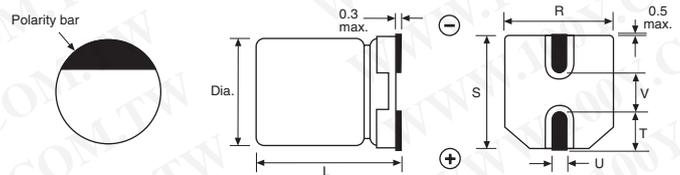
Case Size	H	J	K	M	N	P
4.0 x 5.4	12.0	5.0	5.0	8.0	5.5	5.8
5.0 x 5.4	12.0	6.0	6.0	12.0	5.5	5.8
6.3 x 5.4	16.0	7.0	7.0	12.0	7.5	5.8
6.3 x 7.7	16.0	7.0	7.0	12.0	7.5	8.4
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
4.0 x 5.4	14	2000pcs
5.0 x 5.4	14	1000pcs
6.3 x 5.4	18	1000pcs
6.3 x 7.7	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
4.0 x 5.4	4.0	5.4	4.3	4.3	1.8	0.65	1.0
5.0 x 5.4	5.0	5.4	5.3	5.3	2.1	0.65	1.3
6.3 x 5.4	6.3	5.4	6.6	6.6	2.4	0.65	2.2
6.3 x 7.7	6.3	7.7	6.6	6.6	2.4	0.65	2.2
8.0 x 10.0	8.0	10.0	8.3	8.3	2.9	0.95	3.1
10.0 x 10.0	10.0	10.0	10.3	10.3	3.2	0.95	4.5



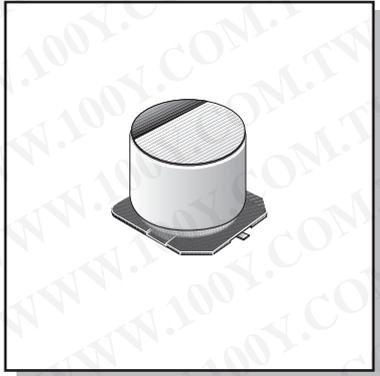
NOVER type VZ

Value (µF)	Ripple Current (mA)	Impedance (Ω)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
6.3 Volt						
22	50	5.0	4.0 x 5.4	VZ0J220MF6R	ZJ220	2000
33	80	2.6	5.0 x 5.4	VZ0J330MF7R	ZJ330	1000
47	80	2.6	5.0 x 5.4	VZ0J470MF7R	ZJ470	1000
100	115	1.3	6.3 x 5.4	VZ0J101MF8R	ZJ101	1000
220	150	0.8	6.3 x 7.7	VZ0J221MF9R	ZJ221	1000
330	150	0.8	6.3 x 7.7	VZ0J331MF9R	ZJ331	1000
470	450	0.45	8.0 x 10.0	VZ0J471MF4R	ZJ471	500
1000	670	0.15	10.0 x 10.0	VZ0J102MF5R	ZJ102	500
1500	670	0.15	10.0 x 10.0	VZ0J152MF5R	ZJ152	500
10 Volt						
22	80	2.6	5.0 x 5.4	VZ1A220MF7R	ZA220	1000
33	80	2.6	5.0 x 5.4	VZ1A330MF7R	ZA330	1000
47	115	1.3	6.3 x 5.4	VZ1A470MF8R	ZA470	1000
100	150	0.8	6.3 x 7.7	VZ1A101MF9R	ZA101	1000
220	150	0.8	6.3 x 7.7	VZ1A221MF9R	ZA221	1000
330	450	0.45	8.0 x 10.0	VZ1A331MF4R	ZA331	500
470	450	0.45	8.0 x 10.0	VZ1A471MF4R	ZA471	500
1000	670	0.15	10.0 x 10.0	VZ1A102MF5R	ZA102	500
16 Volt						
10	50	5.0	4.0 x 5.4	VZ1C100MF6R	ZC100	2000
22	80	2.6	5.0 x 5.4	VZ1C220MF7R	ZC220	1000
33	115	1.3	6.3 x 5.4	VZ1C330MF8R	ZC330	1000
47	115	1.3	6.3 x 5.4	VZ1C470MF8R	ZC470	1000
100	150	0.8	6.3 x 7.7	VZ1C101MF9R	ZC101	1000
220	150	0.8	6.3 x 7.7	VZ1C221MF9R	ZC221	1000
330	450	0.45	8.0 x 10.0	VZ1C331MF4R	ZC331	500
470	670	0.15	10.0 x 10.0	VZ1C471MF5R	ZC471	500
25 Volt						
4.7	50	5.0	4.0 x 5.4	VZ1E4R7MF6R	ZE4R7	2000
10	80	2.6	5.0 x 5.4	VZ1E100MF7R	ZE100	1000
22	115	1.3	6.3 x 5.4	VZ1E220MF8R	ZE220	1000
33	115	1.3	6.3 x 5.4	VZ1E330MF8R	ZE330	1000
47	150	0.8	6.3 x 7.7	VZ1E470MF9R	ZE470	1000
100	150	0.8	6.3 x 7.7	VZ1E101MF9R	ZE101	1000
220	450	0.45	8.0 x 10.0	VZ1E221MF4R	ZE221	500
330	670	0.15	10.0 x 10.0	VZ1E331MF5R	ZE331	500
470	670	0.15	10.0 x 10.0	VZ1E471MF5R	ZE471	500
35 Volt						
4.7	50	5.0	4.0 x 5.4	VZ1V4R7MF6R	ZV4R7	2000
10	80	2.6	5.0 x 5.4	VZ1V100MF7R	ZV100	1000
22	115	1.3	6.3 x 5.4	VZ1V220MF8R	ZV220	1000
33	150	0.8	6.3 x 7.7	VZ1V330MF9R	ZV330	1000
47	150	0.8	6.3 x 7.7	VZ1V470MF9R	ZV470	1000
100	450	0.45	8.0 x 10.0	VZ1V101MF4R	ZV101	500
220	670	0.15	10.0 x 10.0	VZ1V221MF5R	ZV221	500
330	670	0.15	10.0 x 10.0	VZ1V331MF5R	ZV331	500
50 Volt						
1.0	30	5.0	4.0 x 5.4	VZ1H1R0MF6R	ZH1R0	2000
2.2	30	5.0	4.0 x 5.4	VZ1H2R2MF6R	ZH2R2	2000
3.3	30	5.0	4.0 x 5.4	VZ1H3R3MF6R	ZH3R3	2000
4.7	50	3.0	5.0 x 5.4	VZ1H4R7MF7R	ZH4R7	1000
10	70	2.6	6.3 x 5.4	VZ1H100MF8R	ZH100	1000
22	70	2.6	6.3 x 5.4	VZ1H220MF8R	ZH220	1000
33	120	1.0	6.3 x 7.7	VZ1H330MF9R	ZH330	1000
47	120	1.0	6.3 x 7.7	VZ1H470MF9R	ZH470	1000
100	300	0.6	8.0 x 10.0	VZ1H101MF4R	ZH101	500
220	500	0.3	10.0 x 10.0	VZ1H221MF5R	ZH221	500



NOVER type VX

Surface mount, aluminium electrolytic capacitors offering a very low impedance and a 105°C operational temperature limit within a small package. Available in a wide range of values and voltages, which are shown on the following page. Supplied taped and reeled.



- ◆ **Very low impedance**
- ◆ Endurance **2000 hours at 105°C**
- ◆ Excellent performance/size characteristics
- ◆ Ideal for portable equipment & instrumentation
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **20%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

Endurance test 2000 hours at 105°C
 Capacitance tolerance ±20% at 120Hz, 20°C
 Ripple current (as listed) measured at 100Hz, 105°C
 Impedance (as listed) measured at 100kHz
 Operating temperature range -55°C to +105°C
 Leakage current ≤0.01CV or 3µA
 (whichever is greater) after 2 min.

Dissipation factor/Tan δ (max.) at 120Hz, 20°C

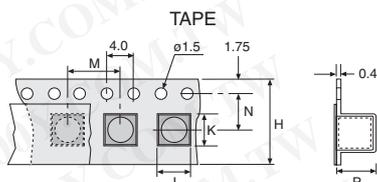
Rated voltage (d.c.)	6.3V	10V	16V	25V	35V	50V
Case dia. 4.0 to 6.3	0.22	0.20	0.16	0.14	0.12	0.10
Case dia. 8.0 to 10.0	0.28	0.24	0.20	0.16	0.14	0.12

Marking

Printed on top surface of case, except largest case sizes which may be printed on a case sleeve around the body.

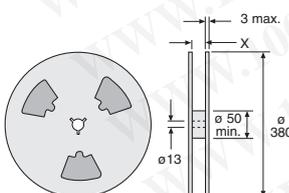
Capacitance value
 Voltage
 Bar to indicate negative terminal

Packaging



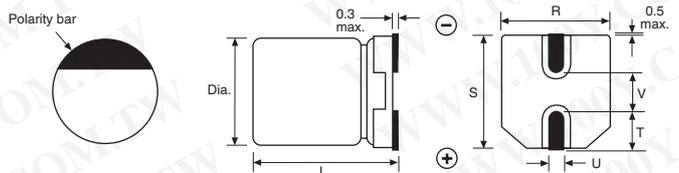
Case Size	H	J	K	M	N	P
4.0 x 5.8	12.0	5.0	5.0	8.0	5.5	6.3
5.0 x 5.8	12.0	6.0	6.0	12.0	5.5	6.3
6.3 x 5.8	16.0	7.0	7.0	12.0	7.5	6.3
6.3 x 7.7	16.0	7.0	7.0	12.0	7.5	8.4
8.0 x 10.0	24.0	8.7	8.7	16.0	11.5	11.0
10.0 x 10.0	24.0	10.7	10.7	16.0	11.5	11.0

REELS



Case Size	X	Reel Qty
4.0 x 5.8	14	2000pcs
5.0 x 5.8	14	1000pcs
6.3 x 5.8	18	1000pcs
6.3 x 7.7	18	1000pcs
8.0 x 10.0	26	500pcs
10.0 x 10.0	26	500pcs

Dimensions (mm)



Case Size	Dia.	L	R	S	T	U	V
4.0 x 5.8	4.0	5.8	4.3	4.3	1.8	0.65	1.0
5.0 x 5.8	5.0	5.8	5.3	5.3	2.1	0.65	1.3
6.3 x 5.8	6.3	5.8	6.6	6.6	2.4	0.65	2.2
6.3 x 7.7	6.3	7.7	6.6	6.6	2.4	0.65	2.2
8.0 x 10.0	8.0	10.0	8.3	8.3	2.9	0.95	3.1
10.0 x 10.0	10.0	10.0	10.3	10.3	3.2	0.95	4.5



NOVER type VX

Value (µF)	Ripple Current (mA)	Impedance (Ω)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
6.3 Volt						
33	150	0.76	5.0 x 5.8	VX0J330MF7R	ZD330	1000
47	150	0.76	5.0 x 5.8	VX0J470MF7R	ZD470	1000
100	230	0.44	6.3 x 5.8	VX0J101MF8R	ZD101	1000
220	280	0.34	6.3 x 7.7	VX0J221MF9R	ZD221	1000
330	280	0.34	6.3 x 7.7	VX0J331MF9R	ZD331	1000
470	450	0.17	8.0 x 10.0	VX0J471MF4R	ZD471	500
1000	670	0.09	10.0 x 10.0	VX0J102MF5R	ZD102	500
1500	670	0.09	10.0 x 10.0	VX0J152MF5R	ZD152	500
10 Volt						
22	80	1.8	4.0 x 5.8	VX1A220MF6R	ZG220	2000
33	150	0.76	5.0 x 5.8	VX1A330MF7R	ZG330	1000
47	230	0.44	6.3 x 5.8	VX1A470MF7R	ZG470	1000
100	280	0.34	6.3 x 7.7	VX1A101MF9R	ZG101	1000
220	280	0.34	6.3 x 7.7	VX1A221MF9R	ZG221	1000
330	450	0.17	8.0 x 10.0	VX1A331MF4R	ZG331	500
470	450	0.17	8.0 x 10.0	VX1A471MF4R	ZG471	500
1000	670	0.09	10.0 x 10.0	VX1A102MF5R	ZG102	500
16 Volt						
22	150	0.76	5.0 x 5.8	VX1C220MF7R	ZM220	1000
33	230	0.44	6.3 x 5.8	VX1C330MF8R	ZM330	1000
47	230	0.44	6.3 x 5.8	VX1C470MF8R	ZM470	1000
100	280	0.34	6.3 x 7.7	VX1C101MF9R	ZM101	1000
220	450	0.17	8.0 x 10.0	VX1C221MF4R	ZM221	500
330	450	0.17	8.0 x 10.0	VX1C331MF4R	ZM331	500
470	670	0.09	10.0 x 10.0	VX1C471MF5R	ZM471	500
25 Volt						
10	80	1.8	4.0 x 5.8	VX1E100MF6R	ZX100	2000
22	230	0.44	6.3 x 5.8	VX1E220MF8R	ZX220	1000
33	230	0.44	6.3 x 5.8	VX1E330MF8R	ZX330	1000
47	280	0.34	6.3 x 7.7	VX1E470MF9R	ZX470	1000
100	280	0.34	6.3 x 7.7	VX1E101MF9R	ZX101	1000
220	450	0.17	8.0 x 10.0	VX1E221MF4R	ZX221	500
330	670	0.09	10.0 x 10.0	VX1E331MF5R	ZX331	500
470	670	0.09	10.0 x 10.0	VX1E471MF5R	ZX471	500
35 Volt						
4.7	80	1.8	4.0 x 5.8	VX1V4R7MF6R	ZY4R7	2000
10	150	0.76	5.0 x 5.8	VX1V100MF7R	ZY100	1000
22	230	0.44	6.3 x 5.8	VX1V220MF8R	ZY220	1000
33	230	0.44	6.3 x 5.8	VX1V330MF8R	ZY330	1000
47	280	0.34	6.3 x 7.7	VX1V470MF9R	ZY470	1000
100	450	0.17	8.0 x 10.0	VX1V101MF4R	ZY101	500
220	670	0.09	10.0 x 10.0	VX1V221MF5R	ZY221	500
330	670	0.09	10.0 x 10.0	VX1V331MF5R	ZY331	500
50 Volt						
1.0	30	5.0	4.0 x 5.8	VX1H1R0MF6R	ZS1R0	2000
2.2	30	5.0	4.0 x 5.8	VX1H2R2MF6R	ZS2R2	2000
3.3	30	5.0	4.0 x 5.8	VX1H3R3MF6R	ZS3R3	2000
4.7	40	1.52	5.0 x 5.8	VX1H4R7MF7R	ZS4R7	1000
10	120	0.88	6.3 x 5.8	VX1H100MF8R	ZS100	1000
22	140	0.68	6.3 x 7.7	VX1H220MF9R	ZS220	1000
33	140	0.68	6.3 x 7.7	VX1H330MF9R	ZS330	1000
47	140	0.68	6.3 x 7.7	VX1H470MF9R	ZS470	1000
100	340	0.18	10.0 x 10.0	VX1H101MF5R	ZS101	500
220	340	0.18	10.0 x 10.0	VX1H221MF5R	ZS221	500





NOVER type VP

Value (μ F)	Ripple Current (mA)	Case Size Dia. x L	Nover Part No.	Anglia Order Code	Reel Qty pcs
6.3 Volt					
22	27	5.0 x 5.3	VP0J220MF2R	VB220	1000
33	45	6.3 x 5.3	VP0J330MF3R	VB330	1000
47	54	6.3 x 5.3	VP0J470MF3R	VB470	1000
10 Volt					
10	18	4.0 x 5.3	VP1A100MF1R	VR100	2000
22	40	6.3 x 5.3	VP1A220MF3R	VR220	1000
33	50	6.3 x 5.3	VP1A330MF3R	VR330	1000
16 Volt					
4.7	14	4.0 x 5.3	VP1C4R7MF1R	VK4R7	2000
10	26	5.0 x 5.3	VP1C100MF2R	VK100	1000
22	45	6.3 x 5.3	VP1C220MF3R	VK220	1000
33	55	6.3 x 5.3	VP1C330MF3R	VK330	1000
25 Volt					
3.3	13	4.0 x 5.3	VP1E3R3MF1R	VN3R3	2000
4.7	20	5.0 x 5.3	VP1E4R7MF2R	VN4R7	1000
10	35	6.3 x 5.3	VP1E100MF3R	VN100	1000
35 Volt					
2.2	10	4.0 x 5.3	VP1V2R2MF1R	VW2R2	2000
3.3	17	5.0 x 5.3	VP1V3R3MF2R	VW3R3	1000
4.7	21	5.0 x 5.3	VP1V4R7MF2R	VW4R7	1000
10	35	6.3 x 5.3	VP1V100MF3R	VW100	1000
50 Volt					
0.1	2.3	4.0 x 5.3	VP1H0R1MF1R	VL0R1	2000
0.22	3.3	4.0 x 5.3	VP1HR22MF1R	VLR22	2000
0.33	4.1	4.0 x 5.3	VP1HR33MF1R	VLR33	2000
0.47	4.9	4.0 x 5.3	VP1HR47MF1R	VLR47	2000
1.0	7.2	4.0 x 5.3	VP1H1R0MF1R	VL1R0	2000
2.2	14	5.0 x 5.3	VP1H2R2MF2R	VL2R2	1000
3.3	17	5.0 x 5.3	VP1H3R3MF2R	VL3R3	1000
4.7	24	6.3 x 5.3	VP1H4R7MF3R	VL4R7	1000





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TANTALUM CAPACITORS

SURFACE MOUNT

CHIP, General Purpose – standard range
CHIP, Low ESR – high ripple current

Type

Page

TC

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RADIAL

DIPPED – General Purpose

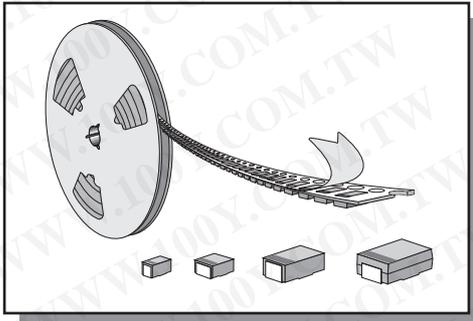
TX

72A-72C



NOVER type TC

Surface mount, solid tantalum capacitors fully encapsulated to provide a mechanically robust construction whilst offering superior resistance to moisture and heat. Supplied taped and reeled.



- ◆ High performance & reliability
- ◆ High volumetric efficiency
- ◆ Fully moulded construction
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **10%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

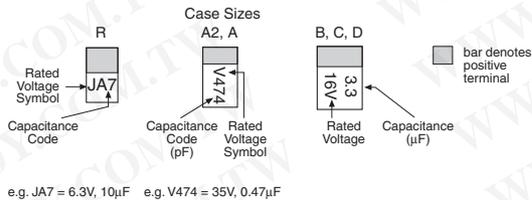
Meets IEC 60384-1, 3 1989
JIS C5101-1, 3 1998

Capacitance tolerance ±10% at 120Hz, 20°C
Operating temperature range -55°C to +125°C
(+125°C with voltage derating - see table below)
Leakage current (as listed) ≤0.01CV or 0.5µA
(whichever is greater) after 5 min.
Dissipation factor (as listed) measured at 120Hz, 20°C
ESR (as listed) measured at 100kHz, 20°C

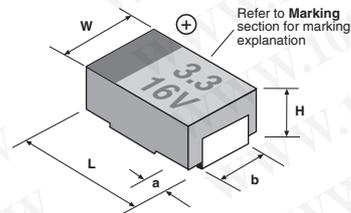
Rated voltage/surge voltage capability

Rated voltage (≤ +85°C)	2.5V	4V	6.3V	10V	16V	20V	25V	35V	d.c.
Rated voltage (≤ +125°C)	1.6V	2.5V	4V	6.3V	10V	13V	16V	22V	d.c.
Surge voltage (≤ +85°C)	3.2V	5.2V	8V	13V	20V	26V	32V	46V	d.c.
Surge voltage (≤ +125°C)	2V	3.2V	5V	8V	12V	16V	20V	28V	d.c.

Marking



Dimensions (mm)

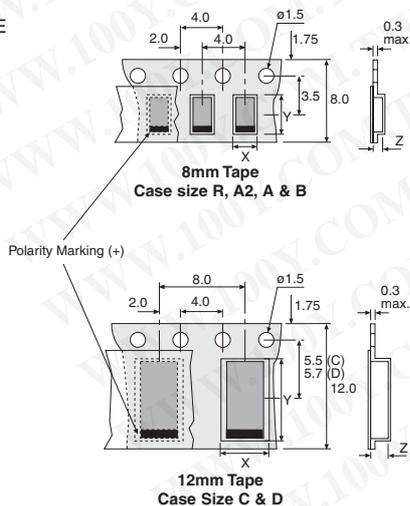


Case Size	L	W	H	a	b
R (0805)	2.0 ±0.2	1.25 ±0.2	1.2 ±0.2	0.5 ±0.3	0.9 ±0.2
A2*	3.2 ±0.2	1.6 ±0.2	1.2 ±0.2	0.8 ±0.3	1.2 ±0.2
A (1206)	3.2 ±0.2	1.6 ±0.2	1.6 ±0.2	0.8 ±0.3	1.2 ±0.2
B	3.4 ±0.2	2.8 ±0.2	1.9 ±0.2	0.8 ±0.3	2.2 ±0.2
C	6.0 ±0.2	3.2 ±0.2	2.5 ±0.2	1.3 ±0.3	2.2 ±0.2
D	7.3 ±0.2	4.3 ±0.2	2.8 ±0.2	1.3 ±0.3	2.4 ±0.2

*low profile 1206 case

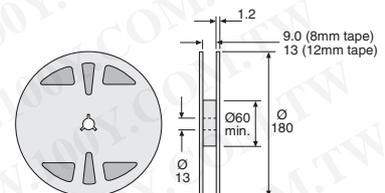
Packaging

TAPE



Case Size	X mm	Y mm	Z mm
R	1.4	2.2	1.2
A2	1.9	3.5	1.25
A	1.9	3.5	1.9
B	3.1	3.8	2.1
C	3.7	6.4	2.9
D	4.8	7.7	3.2

REELS



Case Size	Reel Qty
R, A2	3000pcs
A, B	2000pcs
C, D	500pcs



NOVER type TC

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR max. at 100kHz (Ω)	Nover Part No.	Anglia Order Code	Reel Qty pcs
2.5 Volt							
3.3	R	0.5	8	20	TC0E3R3KR	TX335K	3000
4.7	R	0.5	8	20	TC0E4R7KR	TX475SK	3000
4.7	A2	0.5	8	8	TC0E4R7KA2	TX475K	3000
6.8	R	0.5	8	20	TC0E6R8KR	TX685SK	3000
6.8	A2	0.5	8	8	TC0E6R8KA2	TX685K	3000
10	R	0.5	10	15	TC0E100KR	TX106SK	3000
10	A2	0.5	8	4	TC0E100KA2	TX106K	3000
15	R	0.5	10	15	TC0E150KR	TX156PK	3000
15	A2	0.5	12	4	TC0E150KA2	TX156SK	3000
15	A	0.5	6	4	TC0E150KA	TX156K	2000
22	R	0.5	10	15	TC0E220KR	TX226PK	3000
22	A2	0.55	12	4	TC0E220KA2	TX226SK	3000
22	A	0.55	8	5	TC0E220KA	TX226K	2000
33	A2	0.82	12	4	TC0E330KA2	TX336SK	3000
33	A	0.82	8	4	TC0E330KA	TX336K	2000
47	A	1.17	12	4	TC0E470KA	TX476K	2000
68	A	1.7	14	4	TC0E680KA	TX686SK	2000
68	B	1.7	8	4	TC0E680KB	TX686K	2000
100	B	2.5	8	4	TC0E101KB	TX107K	2000
150	B	3.75	12	4	TC0E151KB	TX157K	2000
220	C	5.5	12	2	TC0E221KC	TX227K	500
330	D	8.25	14	2	TC0E331KD	TX337K	500
470	D	11.75	14	2	TC0E471KD	TX477K	500
4 Volt							
2.2	A2	0.5	8	8	TC0G2R2KA2	TB225K	3000
3.3	R	0.5	8	20	TC0G3R3KR	TB335PK	3000
3.3	A2	0.5	8	8	TC0G3R3KA2	TB335SK	3000
3.3	A	0.5	6	8	TC0G3R3KA	TB335K	2000
4.7	R	0.5	8	20	TC0G4R7KR	TB475PK	3000
4.7	A2	0.5	8	8	TC0G4R7KA2	TB475SK	3000
4.7	A	0.5	8	8	TC0G4R7KA	TB475K	2000
6.8	R	0.5	8	20	TC0G6R8KR	TB685PK	3000
6.8	A2	0.5	8	20	TC0G6R8KA2	TB685SK	3000
6.8	A	0.5	8	4	TC0G6R8KA	TB685K	2000
10	R	0.5	10	15	TC0G100KR	TB106PK	3000
10	A2	0.5	10	15	TC0G100KA2	TB106TK	3000
10	A	0.5	8	4	TC0G100KA	TB106SK	2000
10	B	0.5	6	2.5	TC0G100KB	TB106K	2000
15	R	0.6	10	15	TC0G150KR	TB156PK	3000
15	A2	0.6	10	15	TC0G150KA2	TB156TK	3000
15	A	0.6	8	3	TC0G150KA	TB156SK	2000
15	B	0.6	8	3.5	TC0G150KB	TB156K	2000
22	R	0.88	10	15	TC0G220KR	TB226PK	3000
22	A2	0.88	12	10	TC0G220KA2	TB226TK	3000
22	A	0.88	8	5	TC0G220KA	TB226SK	2000
22	B	0.88	6	1.5	TC0G220KB	TB226RK	2000
33	A	1.32	10	5	TC0G330KA	TB336SK	2000
33	B	1.32	8	2	TC0G330KB	TB336RK	2000
33	C	1.32	6	2.2	TC0G330KC	TB336K	500
47	A	1.88	10	5	TC0G470KA	TB476PK	2000
47	B	1.88	8	2.5	TC0G470KB	TB476SK	2000
47	C	1.88	6	1	TC0G470KC	TB476RK	500
68	B	2.72	8	2.5	TC0G680KB	TB686PK	2000
68	C	2.72	6	1	TC0G680KC	TB686SK	500
68	D	2.72	6	0.7	TC0G680KD	TB686K	500
100	B	4.0	10	2.5	TC0G101KB	TB107PK	2000
100	C	4.0	8	1.5	TC0G101KC	TB107SK	500
100	D	4.0	8	0.8	TC0G101KD	TB107K	500
150	C	6.0	10	1.3	TC0G151KC	TB157SK	500
150	D	6.0	8	0.8	TC0G151KD	TB157K	500
220	C	8.8	12	1.3	TC0G221KC	TB227SK	500
220	D	8.8	8	1	TC0G221KD	TB227RK	500
330	D	13.2	14	1	TC0G331KD	TB337SK	500
470	D	18.8	16	0.7	TC0G471KD	TB477K	500

TC continued overleaf > > > >



NOVER type TC (continued)

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR max. at 100kHz (Ω)	Nover Part No.	Anglia Order Code	Reel Qty pcs
6.3 Volt							
1.0	R	0.5	8	25	TC0J010KR	TW105K	3000
1.5	R	0.5	8	25	TC0J1R5KR	TW155SK	3000
1.5	A2	0.5	8	8	TC0J1R5KA2	TW155K	3000
2.2	R	0.5	8	25	TC0J2R2KR	TW225SK	3000
2.2	A2	0.5	8	8	TC0J2R2KA2	TW225RK	3000
2.2	A	0.5	6	8	TC0J2R2KA	TW225K	2000
3.3	R	0.5	8	20	TC0J3R3KR	TW335SK	3000
3.3	A2	0.5	8	8	TC0J3R3KA2	TW335RK	3000
3.3	A	0.5	6	7	TC0J3R3KA	TW335K	2000
4.7	R	0.5	8	20	TC0J4R7KR	TW475PK	3000
4.7	A2	0.5	8	8	TC0J4R7KA2	TW475SK	3000
4.7	A	0.5	6	4	TC0J4R7KA	TW475K	2000
6.8	R	0.5	8	15	TC0J6R8KR	TW685PK	3000
6.8	A2	0.5	10	8	TC0J6R8KA2	TW685TK	3000
6.8	A	0.5	6	4.5	TC0J6R8KA	TW685SK	2000
6.8	B	0.5	6	2.5	TC0J6R8KB	TW685K	2000
10	R	0.63	10	15	TC0J100KR	TW106PK	3000
10	A2	0.63	8	4	TC0J100KA2	TW106TK	3000
10	A	0.63	8	3	TC0J100KA	TW106SK	2000
10	B	0.63	6	3	TC0J100KB	TW106K	2000
15	A2	0.94	12	5	TC0J150KA2	TW156DK	3000
15	A	0.94	8	5	TC0J150KA	TW156PK	2000
15	B	0.94	6	1.5	TC0J150KB	TW156SK	2000
22	A	1.38	8	5	TC0J220KA	TW226PK	2000
22	B	1.38	8	2	TC0J220KB	TW226SK	2000
22	C	1.38	6	1	TC0J220KC	TW226K	500
33	A	2.07	10	5	TC0J330KA	TW336PK	2000
33	B	2.07	8	2.5	TC0J330KB	TW336SK	2000
33	C	2.07	6	1	TC0J330KC	TW336K	500
47	B	2.96	8	2.5	TC0J470KB	TW476PK	2000
47	C	2.96	6	1	TC0J470KC	TW476SK	500
47	D	2.96	6	0.7	TC0J470KD	TW476K	500
68	B	4.28	10	2.5	TC0J680KB	TW686PK	2000
68	C	4.28	8	1.5	TC0J680KC	TW686SK	500
68	D	4.28	6	0.8	TC0J680KD	TW686K	500
100	B	6.3	10	2.5	TC0J101KB	TW107PK	2000
100	C	6.3	10	1.3	TC0J101KC	TW107SK	500
100	D	6.3	8	0.8	TC0J101KD	TW107K	500
150	C	9.45	10	1.3	TC0J151KC	TW157SK	500
150	D	9.45	8	1	TC0J151KD	TW157K	500
220	D	13.86	12	0.7	TC0J221KD	TW227SK	500
330	D	20.79	16	0.7	TC0J331KD	TW337SK	500
10 Volt							
0.68	R	0.5	8	28	TC1A68KR	TL684K	3000
1.0	R	0.5	8	25	TC1A010KR	TL105K	3000
1.0	A2	0.5	6	8	TC1A010KA2	TL105LK	3000
1.5	R	0.5	8	25	TC1A1R5KR	TL155SK	3000
1.5	A2	0.5	8	8	TC1A1R5KA2	TL155RK	3000
1.5	A	0.5	6	8	TC1A1R5KA	TL155K	2000
2.2	R	0.5	8	20	TC1A2R2KR	TL225SK	3000
2.2	A2	0.5	8	8	TC1A2R2KA2	TL225RK	3000
2.2	A	0.5	6	7	TC1A2R2KA	TL225K	2000
3.3	R	0.5	8	20	TC1A3R3KR	TL335PK	3000
3.3	A2	0.5	8	8	TC1A3R3KA2	TL335SK	3000
3.3	A	0.5	6	4	TC1A3R3KA	TL335K	2000
4.7	R	0.5	8	15	TC1A4R7KR	TL475PK	3000
4.7	A2	0.5	10	8	TC1A4R7KA2	TL475TK	3000
4.7	A	0.5	6	4.5	TC1A4R7KA	TL475SK	2000
4.7	B	0.5	6	3	TC1A4R7KB	TL475K	2000
6.8	A	0.68	6	3	TC1A6R8KA	TL685SK	2000
6.8	B	0.68	6	3	TC1A6R8KB	TL685K	2000
10	A	1.0	8	5	TC1A100KA	TL106PK	2000
10	B	1.0	6	1.5	TC1A100KB	TL106SK	2000
15	A	1.5	8	5	TC1A150KA	TL156PK	2000
15	B	1.5	6	2	TC1A150KB	TL156SK	2000
15	C	1.5	6	1	TC1A150KC	TL156K	500
22	B	2.2	8	2.5	TC1A220KB	TL226SK	2000
22	C	2.2	6	1	TC1A220KC	TL226K	500
33	B	3.3	8	2.5	TC1A330KB	TL336PK	2000
33	C	3.3	6	1	TC1A330KC	TL336SK	500
33	D	3.3	6	0.7	TC1A330KD	TL336K	500
47	B	4.7	10	2.5	TC1A470KB	TL476PK	2000
47	C	4.7	6	1.5	TC1A470KC	TL476SK	500
47	D	4.7	6	0.8	TC1A470KD	TL476K	500
68	C	6.8	8	1.3	TC1A680KC	TL686SK	500
68	D	6.8	6	0.8	TC1A680KD	TL686K	500
100	C	10.0	10	1.3	TC1A101KC	TL107SK	500
100	D	10.0	8	1	TC1A101KD	TL107K	500
150	D	15.0	10	0.7	TC1A151KD	TL157SK	500



NOVER type TC (continued)

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR max. at 100kHz (Ω)	Nover Part No.	Anglia Order Code	Reel Qty pcs
16 Volt							
0.33	R	0.5	6	28	TC1CR33KR	TP334K	3000
0.47	R	0.5	6	28	TC1CR47KR	TP474K	3000
0.68	R	0.5	6	28	TC1CR68KR	TP684SK	3000
0.68	A2	0.5	6	14	TC1CR68KA2	TP684K	3000
1.0	R	0.5	6	25	TC1C010KR	TP105SK	3000
1.0	A2	0.5	6	10	TC1C010KA2	TP105RK	3000
1.0	A	0.5	4	8	TC1C010KA	TP105K	2000
1.5	R	0.5	8	20	TC1C1R5KR	TP155PK	3000
1.5	A2	0.5	6	9	TC1C1R5KA2	TP155SK	3000
1.5	A	0.5	6	8	TC1C1R5KA	TP155K	2000
2.2	R	0.5	8	20	TC1C2R2KR	TP225PK	3000
2.2	A2	0.5	6	8	TC1C2R2KA2	TP225TK	3000
2.2	A	0.5	6	5	TC1C2R2KA	TP225SK	2000
3.3	A	0.5	6	4.5	TC1C3R3KA	TP335SK	2000
3.3	B	0.5	6	3	TC1C3R3KB	TP335K	2000
4.7	A	0.75	6	5	TC1C4R7KA	TP475SK	2000
4.7	B	0.75	6	3.5	TC1C4R7KB	TP475K	2000
6.8	A	1.08	6	5	TC1C6R8KA	TP685PK	2000
6.8	B	1.08	6	1.5	TC1C6R8KB	TP685SK	2000
10	A	1.6	8	5	TC1C100KA	TP106PK	2000
10	B	1.6	6	4	TC1C100KB	TP106SK	2000
10	C	1.6	6	2.2	TC1C100KC	TP106K	500
15	B	2.4	6	2.5	TC1C150KB	TP156SK	2000
15	C	2.4	6	2	TC1C150KC	TP156K	500
22	B	3.52	6	2.5	TC1C220KB	TP226PK	2000
22	C	3.52	6	1	TC1C220KC	TP226SK	500
22	D	3.52	6	0.7	TC1C220KD	TP226K	500
33	C	5.28	6	1.5	TC1C330KC	TP336SK	500
33	D	5.28	6	1	TC1C330KD	TP336K	500
47	C	7.52	8	1.3	TC1C470KC	TP476SK	500
47	D	7.52	6	1	TC1C470KD	TP476K	500
68	D	10.8	6	1	TC1C680KD	TP686K	500
100	D	16.0	10	0.7	TC1C101KD	TP107SK	500
20 Volt							
0.1	A2	0.5	6	28	TC1DR10KA2	TA104K	3000
0.15	A2	0.5	6	25	TC1DR15KA2	TA154K	3000
0.22	A2	0.5	6	23	TC1DR22KA2	TA224K	3000
0.33	A2	0.5	6	20	TC1DR33KA2	TA334K	3000
0.47	A2	0.5	6	15	TC1DR47KA2	TA474K	3000
0.68	A2	0.5	6	14	TC1DR68KA2	TA684RK	3000
0.68	A	0.5	4	12	TC1DR68KA	TA684K	2000
1.0	A2	0.5	6	10	TC1D010KA2	TA105RK	3000
1.0	A	0.5	4	9	TC1D010KA	TA105K	2000
1.5	A2	0.5	6	9	TC1D1R5KA2	TA155SK	3000
1.5	A	0.5	6	8	TC1D1R5KA	TA155K	2000
2.2	A	0.5	6	6	TC1D2R2KA	TA225SK	2000
2.2	B	0.5	6	5	TC1D2R2KB	TA225K	2000
3.3	A	0.66	6	4.5	TC1D3R3KA	TA335PK	2000
3.3	B	0.66	6	3.8	TC1D3R3KB	TA335SK	2000
4.7	A	0.94	6	6	TC1D4R7KA	TA475PK	2000
4.7	B	0.94	6	5	TC1D4R7KB	TA475SK	2000
6.8	B	1.36	6	3	TC1D6R8KB	TA685SK	2000
6.8	C	1.36	6	2.5	TC1D6R8KC	TA685K	500
10	B	2.0	6	3	TC1D100KB	TA106SK	2000
10	C	2.0	6	2.5	TC1D100KC	TA106K	500
15	C	3.0	6	2	TC1D150KC	TA156SK	500
15	D	3.0	6	2	TC1D150KD	TA156K	500
22	C	4.4	6	1.5	TC1D220KC	TA226SK	500
22	D	4.4	6	1	TC1D220KD	TA226K	500
33	D	6.6	6	1	TC1D330KD	TA336K	500
47	D	9.4	6	1	TC1D470KD	TA476SK	500

TC continued overleaf > > >

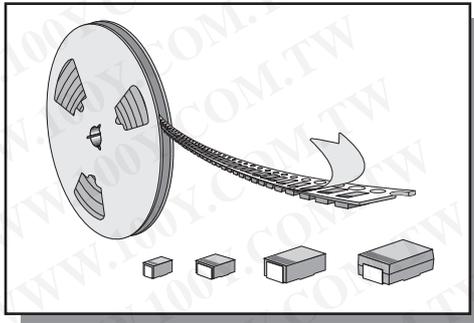


NOVER type TC (continued)

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR max. at 100kHz (Ω)	Nover Part No.	Anglia Order Code	Reel Qty pcs
25 Volt							
0.47	A	0.5	4	15	TC1ER47KA	TM474K	2000
0.68	A	0.5	4	10	TC1ER68KA	TM684K	2000
1.0	A	0.5	6	8	TC1E010KA	TM105K	2000
1.5	A	0.5	6	7	TC1E1R5KA	TM155SK	2000
1.5	B	0.5	6	5	TC1E1R5KB	TM155K	2000
2.2	A	0.55	6	8	TC1E2R2KA	TM225SK	2000
2.2	B	0.55	6	5	TC1E2R2KB	TM225K	2000
3.3	B	0.82	6	4	TC1E3R3KB	TM335SK	2000
4.7	B	1.17	6	3.5	TC1E4R7KB	TM475SK	2000
4.7	C	1.17	6	2.5	TC1E4R7KC	TM475K	500
6.8	C	1.7	6	2	TC1E6R8KC	TM685SK	500
10	C	2.5	6	1.5	TC1E100KC	TM106SK	500
10	D	2.5	6	1.2	TC1E100KD	TM106K	500
15	D	3.75	6	1	TC1E150KD	TM156K	500
22	D	5.5	6	1	TC1E220KD	TM226K	500
35 Volt							
0.1	A	0.5	4	28	TC1VR10KA	TC104K	2000
0.15	A	0.5	4	24	TC1VR15KA	TC154K	2000
0.22	A	0.5	4	20	TC1VR22KA	TC224K	2000
0.33	A	0.5	4	15	TC1VR33KA	TC334K	2000
0.47	A	0.5	4	11	TC1VR47KA	TC474SK	2000
0.47	B	0.5	4	11	TC1VR47KB	TC474K	2000
0.68	A	0.5	4	8	TC1VR68KA	TC684SK	2000
0.68	B	0.5	4	8	TC1VR68KB	TC684K	2000
1.0	A	0.5	4	9	TC1V010KA	TC105SK	2000
1.0	B	0.5	4	6	TC1V010KB	TC105K	2000
1.5	B	0.52	6	5	TC1V1R5KB	TC155SK	2000
1.5	C	0.52	6	4.5	TC1V1R5KC	TC155K	500
2.2	B	0.77	6	4	TC1V2R2KB	TC225SK	2000
2.2	C	0.77	6	3.5	TC1V2R2KC	TC225K	500
3.3	B	1.15	6	4.5	TC1V3R3KB	TC335SK	2000
3.3	C	1.15	6	3	TC1V3R3KC	TC335K	500
4.7	C	1.64	6	2	TC1V4R7KC	TC475SK	500
4.7	D	1.64	6	1.5	TC1V4R7KD	TC475K	500
6.8	C	2.38	6	2.3	TC1V6R8KC	TC685SK	500
6.8	D	2.38	6	1.3	TC1V6R8KD	TC685K	500
10	D	3.5	6	1	TC1V100KD	TC106K	500
15	D	5.25	6	1	TC1V150KD	TC156K	500

NOVER type TL

Low ESR, surface mount, solid tantalum capacitors capable of handling higher ripple current and producing greater circuit efficiency. Utilisation of the latest technology ensures optimum performance. Fully encapsulated to provide a mechanically robust construction whilst offering superior resistance to moisture and heat. Supplied taped and reeled.



- ◆ Low ESR
- ◆ High ripple current
- ◆ Optimised performance & reliability
- ◆ Fully moulded construction
- ◆ Suitable for wave & reflow soldering
- ◆ Capacitance tolerance **10%**
- ◆ Leakage current **≤0.01CV**
- ◆ Supplied taped & reeled

Specification

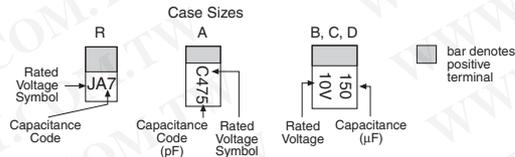
Meets IEC 60384-1, 3 1989
JIS C5101-1, 3 1998

Capacitance tolerance	±10% at 120Hz, 20°C
Operating temperature range	-55°C to +125°C (+125°C with voltage derating - see table below)
Leakage current (as listed)	≤0.01CV or 0.5µA (whichever is greater) after 5 min.
Dissipation factor (as listed)	measured at 120Hz, 20°C
ESR (as listed)	measured at 100kHz, 20°C
Ripple current (as listed)	measured at 100kHz, 20°C

Rated voltage/surge voltage capability

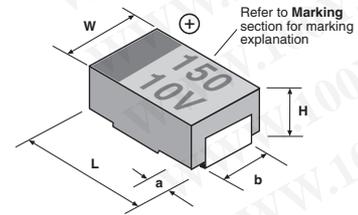
Rated voltage (≤ +85°C)	6.3V	10V	16V	d.c.
Rated voltage (≤ +125°C)	4V	6.3V	10V	d.c.
Surge voltage (≤ +85°C)	8V	13V	20V	d.c.
Surge voltage (≤ +125°C)	5V	8V	12V	d.c.

Marking



e.g. JA7 = 6.3V, 10µF e.g. C475 = 16V, 4.7µF

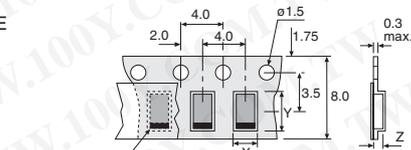
Dimensions (mm)



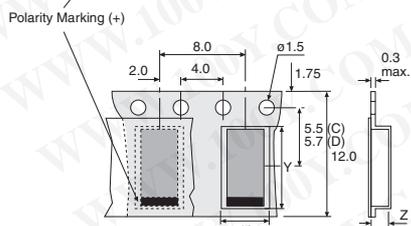
Case Size	L	W	H	a	b
R (0805)	2.0 ±0.2	1.25 ±0.2	1.2 ±0.2	0.5 ±0.3	0.9 ±0.2
A (1206)	3.2 ±0.2	1.6 ±0.2	1.6 ±0.2	0.8 ±0.3	1.2 ±0.2
B	3.4 ±0.2	2.8 ±0.2	1.9 ±0.2	0.8 ±0.3	2.2 ±0.2
C	6.0 ±0.2	3.2 ±0.2	2.5 ±0.2	1.3 ±0.3	2.2 ±0.2
D	7.3 ±0.2	4.3 ±0.2	2.8 ±0.2	1.3 ±0.3	2.4 ±0.2

Packaging

TAPE



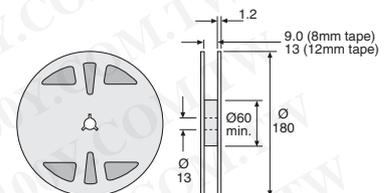
8mm Tape
Case size R, A & B



12mm Tape
Case Size C & D

Case Size	X mm	Y mm	Z mm
R	1.4	2.2	1.2
A	1.9	3.5	1.9
B	3.1	3.8	2.1
C	3.7	6.4	2.9
D	4.8	7.7	3.2

REELS



Case Size	Reel Qty
R	3000pcs
A, B	2000pcs
C, D	500pcs

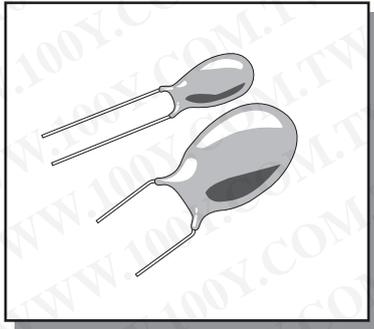
TL continued overleaf >>>>

NOVER type TL

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR max. at 100kHz (m Ω)	Ripple Current (mA)	Nover Part No.	Anglia Order Code	Reel Qty pcs
6.3 Volt								
10	R	0.63	10	1200	130	TL0J100KR1200	TG106SK1200	3000
10	A	0.63	8	1200	160	TL0J100KA1200	TG106K1200	2000
22	B	1.38	8	800	190	TL0J220KB0800	TG226K800	2000
33	B	2.07	8	800	190	TL0J330KB0800	TG336K800	2000
47	B	2.96	8	1000	170	TL0J470KB1000	TG476SK1000	2000
47	C	2.96	6	400	350	TL0J470KC0400	TG476K400	500
100	D	6.3	8	350	460	TL0J101KD0350	TG107LK350	500
150	D	9.45	8	120	790	TL0J151KD0120	TG157K120	500
220	D	13.86	12	120	790	TL0J221KD0120	TG227K120	500
10 Volt								
10	A	1.0	8	1300	150	TL1A100KA1300	TH106K1300	2000
22	B	2.2	8	1000	170	TL1A220KB1000	TH226K1000	2000
33	C	3.3	6	375	370	TL1A330KC0375	TH336K375	500
47	C	4.7	6	400	350	TL1A470KC0400	TH476K400	500
100	D	10.0	8	120	790	TL1A101KD0120	TH107PK120	500
150	D	15.0	10	120	790	TL1A151KD0120	TH157K120	500
16 Volt								
3.3	A	0.5	6	1800	130	TL1C3R3KA1800	TJ335K1800	2000
4.7	A	0.75	6	1800	130	TL1C4R7KA1800	TJ475K1800	2000
10	B	1.6	6	1000	170	TL1C100KB1000	TJ106K1000	2000
22	C	3.52	6	400	350	TL1C220KC0400	TJ226K400	500
33	C	5.28	6	400	350	TL1C330KC0400	TJ336K400	500
47	D	7.52	6	300	500	TL1C470KD0300	TJ476K300	500

NOVER type TX

Miniature resin dipped solid bead tantalum capacitors ideally suited where high performance and stability is required.



- ◆ High performance & stability
- ◆ High volumetric efficiency
- ◆ Flame retardant coating
- ◆ Choice of pitch
- ◆ Capacitance tolerance **20%**
- ◆ Body colour **Gold**

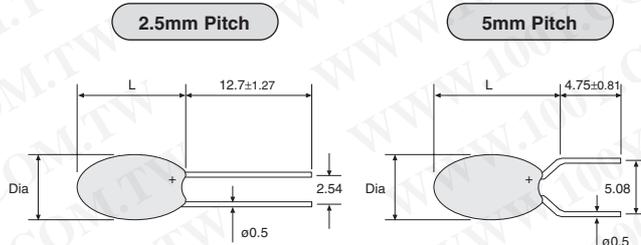
Specification

Capacitance tolerance $\pm 20\%$ at 120Hz, 25°C
 Operating temperature range -55°C to +85°C
 (+125°C with voltage derating - see table below)
 Leakage current (as listed) measured at 25°C
 Dissipation factor (as listed) measured at 120Hz, 25°C
 ESR (as listed) measured at 100kHz, 25°C
 Power dissipation (as listed) measured at 25°C
 Ripple current $\sqrt{P \div R}$
 where P = power dissipation
 R = ESR

Rated voltage/surge voltage capability

Rated voltage ($\leq +85^\circ\text{C}$)	6.3V	10V	16V	25V	35V	50V	d.c.
Rated voltage ($\leq +125^\circ\text{C}$)	4V	6.3V	10V	16V	23V	33V	d.c.
Surge voltage ($\leq +85^\circ\text{C}$)	8V	13V	20V	33V	46V	65V	d.c.
Surge voltage ($\leq +125^\circ\text{C}$)	5V	8V	12V	20V	28V	40V	d.c.

Dimensions (mm)



Case Size	L (max)		Dia. (max)
	2.5mm Pitch	5mm Pitch	
A	7.0	8.5	4.5
B	7.5	9.0	4.5
C	8.5	10.0	5.0
D	9.0	10.5	5.0
E	9.0	10.5	5.5
F	10.0	11.5	6.0
G	10.0	11.5	6.5
H	10.5	12.0	7.0
J	11.5	13.0	8.0
K	12.5	14.0	8.5
L	-	14.0	9.0
M	-	14.5	9.0
N	-	16.0	9.0
P	-	17.0	10.0
R	-	18.5	10.0

DIPPED TANTALUM

Also available to special order

- ◆ OTHER VALUES ◆
- ◆ OTHER VOLTAGES ◆
- ◆ OTHER TOLERANCES ◆
- ◆ TAPED PRODUCT ◆
boxed or reeled



DIPPED, General Purpose

RADIAL

NOVER type TX

2.5mm Pitch

5mm Pitch

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR at 100kHz (Ω) max.	Power Dissipation (W) max.	Nover Part No.	2.5mm Pitch		5mm Pitch	
							Anglia Order Code	Nover Part No.	Anglia Order Code	
6.3 Volt										
3.3	A	0.5	5	13.0	0.04	TX0J3R3M2	058059	TX0J3R3M5	058059A	
4.7	A	0.5	5	10.0	0.04	TX0J4R7M2	058060	TX0J4R7M5	058060A	
6.8	A	0.5	5	8.0	0.04	TX0J6R8M2	058061	TX0J6R8M5	058061A	
10	B	0.5	6	6.0	0.05	TX0J100M2	058001	TX0J100M5	058001A	
15	C	0.7	6	5.0	0.06	TX0J150M2	058002	TX0J150M5	058002A	
22	D	1.1	6	3.7	0.065	TX0J220M2	058003	TX0J220M5	058003A	
33	E	1.6	6	3.0	0.07	TX0J330M2	058004	TX0J330M5	058004A	
47	F	2.3	6	2.0	0.08	TX0J470M2	058005	TX0J470M5	058005A	
68	G	3.3	6	1.8	0.09	TX0J680M2	058064	TX0J680M5	058064A	
100	H	4.8	8	1.6	0.10	TX0J101M2	058006	TX0J101M5	058006A	
150	J	7.2	8	0.9	0.11	-	-	TX0J151M5	058065A	
220	K	10.0	8	0.9	0.12	-	-	TX0J221M5	058062A	
330	L	10.0	8	0.7	0.13	-	-	TX0J331M5	058063A	
10 Volt										
2.2	A	0.5	5	13.0	0.04	TX1A2R2M2	058007	TX1A2R2M5	058007A	
3.3	A	0.5	5	10.0	0.04	TX1A3R3M2	058008	TX1A3R3M5	058008A	
4.7	A	0.5	5	8.0	0.04	TX1A4R7M2	058009	TX1A4R7M5	058009A	
6.8	B	0.5	5	6.0	0.05	TX1A6R8M2	058010	TX1A6R8M5	058010A	
10	C	0.8	6	5.0	0.06	TX1A100M2	058011	TX1A100M5	058011A	
15	E	1.2	6	3.7	0.07	TX1A150M2	058012	TX1A150M5	058012A	
22	E	1.8	6	2.7	0.07	TX1A220M2	058013	TX1A220M5	058013A	
33	F	2.6	6	2.1	0.08	TX1A330M2	058014	TX1A330M5	058014A	
47	H	3.8	6	1.7	0.10	TX1A470M2	058015	TX1A470M5	058015A	
68	H	5.4	6	1.3	0.10	TX1A680M2	058070	TX1A680M5	058070A	
100	J	8.0	8	1.0	0.11	-	-	TX1A101M5	058071A	
150	K	10.0	8	0.8	0.12	-	-	TX1A151M5	058072A	
220	L	10.0	8	0.6	0.13	-	-	TX1A221M5	058073A	
16 Volt										
1.5	A	0.5	5	10.0	0.04	TX1C1R5M2	058080	TX1C1R5M5	058080A	
2.2	A	0.5	5	8.0	0.04	TX1C2R2M2	058016	TX1C2R2M5	058016A	
3.3	A	0.5	5	6.0	0.04	TX1C3R3M2	058017	TX1C3R3M5	058017A	
4.7	B	0.6	5	5.0	0.05	TX1C4R7M2	058050	TX1C4R7M5	058050A	
6.8	C	0.9	5	4.0	0.06	TX1C6R8M2	058018	TX1C6R8M5	058018A	
10	E	1.3	6	3.2	0.07	TX1C100M2	058019	TX1C100M5	058019A	
15	E	1.8	6	2.5	0.07	TX1C150M2	058020	TX1C150M5	058020A	
22	F	2.6	6	2.0	0.08	TX1C220M2	058021	TX1C220M5	058021A	
33	H	4.0	6	1.6	0.10	TX1C330M2	058022	TX1C330M5	058022A	
47	J	5.6	6	1.3	0.11	-	-	TX1C470M5	058023A	
68	K	8.2	6	1.0	0.12	-	-	TX1C680M5	058081A	
100	L	10.0	8	0.8	0.13	-	-	TX1C101M5	058025A	
150	M	10.0	8	0.6	0.14	-	-	TX1C151M5	058026A	
25 Volt										
1.0	A	0.5	3	10.0	0.04	TX1E010M2	058201	TX1E010M5	058201A	
1.5	A	0.5	5	8.0	0.04	TX1E1R5M2	058202	TX1E1R5M5	058202A	
2.2	B	0.5	5	6.0	0.05	TX1E2R2M2	058203	TX1E2R2M5	058203A	
3.3	B	0.7	5	5.0	0.05	TX1E3R3M2	058204	TX1E3R3M5	058204A	
4.7	C	0.9	5	4.0	0.06	TX1E4R7M2	058205	TX1E4R7M5	058205A	
6.8	E	1.4	5	3.1	0.07	TX1E6R8M2	058206	TX1E6R8M5	058206A	
10	E	2.0	6	2.5	0.07	TX1E100M2	058207	TX1E100M5	058207A	
15	G	3.0	6	2.0	0.09	TX1E150M2	058208	TX1E150M5	058208A	
22	H	4.4	6	1.5	0.10	TX1E220M2	058209	TX1E220M5	058209A	
33	J	6.6	6	1.2	0.11	-	-	TX1E330M5	058210A	
47	K	9.4	6	1.0	0.12	-	-	TX1E470M5	058211A	
68	L	10.0	6	0.8	0.13	-	-	TX1E680M5	058212A	

TX continued overleaf > > >



NOVER type TX (continued)

2.5mm Pitch

5mm Pitch

Value (μ F)	Case Size	DC Leakage Current (μ A) max.	Dissipation Factor (%) max.	ESR at 100kHz (Ω) max.	Power Dissipation (W) max.	2.5mm Pitch		5mm Pitch	
						Nover Part No.	Anglia Order Code	Nover Part No.	Anglia Order Code
35 Volt									
0.1	A	0.5	3	26.0	0.04	TX1V0R1M2	058036	TX1V0R1M5	058036A
0.15	A	0.5	3	21.0	0.04	TX1VR15M2	058037	TX1VR15M5	058037A
0.22	A	0.5	3	17.0	0.04	TX1VR22M2	058038	TX1VR22M5	058038A
0.33	A	0.5	3	15.0	0.04	TX1VR33M2	058039	TX1VR33M5	058039A
0.47	A	0.5	3	13.0	0.04	TX1VR47M2	058040	TX1VR47M5	058040A
0.68	A	0.5	3	10.0	0.04	TX1VR68M2	058041	TX1VR68M5	058041A
1.0	A	0.5	3	8.0	0.04	TX1V010M2	058042	TX1V010M5	058042A
1.5	B	0.5	5	6.0	0.05	TX1V1R5M2	058043	TX1V1R5M5	058043A
2.2	C	0.6	5	5.0	0.06	TX1V2R2M2	058044	TX1V2R2M5	058044A
3.3	D	0.9	5	4.0	0.065	TX1V3R3M2	058045	TX1V3R3M5	058045A
4.7	E	1.3	5	3.0	0.07	TX1V4R7M2	058046	TX1V4R7M5	058046A
6.8	F	1.9	5	2.5	0.08	TX1V6R8M2	058047	TX1V6R8M5	058047A
10	G	2.8	6	2.0	0.09	TX1V100M2	058048	TX1V100M5	058048A
15	J	4.2	6	1.6	0.11	-	-	TX1V150M5	058049A
22	K	6.2	6	1.3	0.12	-	-	TX1V220M5	058051A
33	L	9.2	6	1.0	0.13	-	-	TX1V330M5	058052A
47	M	10.0	6	0.8	0.14	-	-	TX1V470M5	058053A
50 Volt									
0.1	A	0.5	3	26.0	0.04	TX1H0R1M2	058501	TX1H0R1M5	058501A
0.15	A	0.5	3	21.0	0.04	TX1HR15M2	058502	TX1HR15M5	058502A
0.22	A	0.5	3	17.0	0.04	TX1HR22M2	058503	TX1HR22M5	058503A
0.33	A	0.5	3	15.0	0.04	TX1HR33M2	058504	TX1HR33M5	058504A
0.47	B	0.5	3	13.0	0.05	TX1HR47M2	058505	TX1HR47M5	058505A
0.68	B	0.5	3	10.0	0.05	TX1HR68M2	058506	TX1HR68M5	058506A
1.0	B	0.5	3	8.0	0.05	TX1H010M2	058507	TX1H010M5	058507A
1.5	E	0.6	5	5.0	0.07	TX1H1R5M2	058508	TX1H1R5M5	058508A
2.2	E	0.9	5	3.5	0.07	TX1H2R2M2	058509	TX1H2R2M5	058509A
3.3	F	1.3	5	3.0	0.08	TX1H3R3M2	058510	TX1H3R3M5	058510A
4.7	G	1.9	5	2.5	0.09	TX1H4R7M2	058511	TX1H4R7M5	058511A
6.8	J	2.7	5	2.0	0.11	-	-	TX1H6R8M5	058512A
10	K	4.0	6	1.6	0.12	-	-	TX1H100M5	058513A
15	L	6.0	6	1.2	0.13	-	-	TX1H150M5	058514A
22	M	8.8	6	1.0	0.14	-	-	TX1H220M5	058515A