

# Solid Tantalum Surface Mount Capacitors TANTAMOUNT<sup>®</sup>, Molded Case, Low ESR



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

**FEATURES**

- Terminations: 100 % matte tin, standard tin/lead available
- Molded case available in seven case codes
- Compatible with "High Volume" automatic pick and place equipment
- Mounting: Surface mount
- High ripple current carrying capability
- Low ESR
- Meets EIA 535BAAC and IEC specification QC300801/US0001
- Compliant to RoHS Directive 2002/95/EC
- 100 % surge current tested (C, D, and E case sizes)


**Note**

\* Pb containing terminations are not RoHS compliant, exemptions may apply

**Operating Temperature:** - 55 °C to + 85 °C  
 (to + 125 °C with voltage derating)

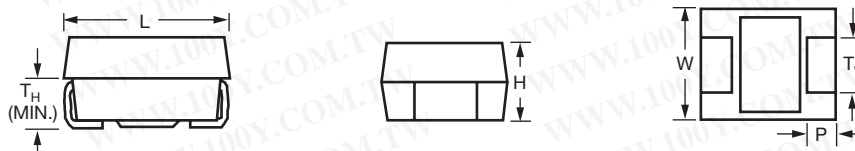
**Capacitance Range:** 0.47 μF to 1000 μF  
**Capacitance Tolerance:** ± 10 %, ± 20 %  
**Voltage Rating:** 4 V<sub>DC</sub> to 63 V<sub>DC</sub>

**ORDERING INFORMATION**

TR3 TYPE	D CASE CODE	107 CAPACITANCE	K CAPACITANCE TOLERANCE	010 DC VOLTAGE RATING AT + 85 °C	C TERMINATION AND PACKAGING	0100 ESR
See Ratings and Case Codes table	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K = ± 10 % M = ± 20 %	This is expressed in V. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 V).	C = Matte tin/7" (178 mm) reels D = Matte tin/13" (330 mm) reels E = Tin/lead/7" (178 mm) reels F = Tin/lead/13" (330 mm) reels	Maximum 100 kHz ESR in mΩ. See note below.	

**Note**

- We reserve the right to supply higher voltage ratings and tighter capacitance tolerance capacitors in the same case size. Voltage substitutions will be marked with the higher voltage rating. The EIA and CECC standards for low ESR solid tantalum chip capacitors, allow delta ESR of 1.25 times the datasheet limit after mounting.

**DIMENSIONS** in inches [millimeters]


CASE CODE	EIA SIZE	L	W	H	P	T <sub>w</sub>	T <sub>H</sub> MIN.
A	3216-18	0.126 ± 0.008 [3.2 ± 0.20]	0.063 ± 0.008 [1.6 ± 0.20]	0.063 ± 0.008 [1.6 ± 0.20]	0.031 ± 0.012 [0.80 ± 0.30]	0.047 ± 0.004 [1.2 ± 0.10]	0.028 [0.70]
B	3528-21	0.138 ± 0.008 [3.5 ± 0.20]	0.110 ± 0.008 [2.8 ± 0.20]	0.075 ± 0.008 [1.9 ± 0.20]	0.031 ± 0.012 [0.80 ± 0.30]	0.087 ± 0.004 [2.2 ± 0.10]	0.028 [0.70]
C	6032-28	0.236 ± 0.012 [6.0 ± 0.30]	0.126 ± 0.012 [3.2 ± 0.30]	0.098 ± 0.012 [2.5 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.087 ± 0.004 [2.2 ± 0.10]	0.039 [1.0]
D	7343-31	0.287 ± 0.012 [7.3 ± 0.30]	0.170 ± 0.012 [4.3 ± 0.30]	0.110 ± 0.012 [2.8 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.094 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]
E	7343-43	0.287 ± 0.012 [7.3 ± 0.30]	0.169 ± 0.012 [4.3 ± 0.30]	0.157 ± 0.012 [4.0 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.094 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]
V	7343-20	0.287 ± 0.012 [7.3 ± 0.30]	0.169 ± 0.012 [4.3 ± 0.30]	0.079 max. [2.0 max.]	0.051 ± 0.012 [1.3 ± 0.30]	0.094 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]
W <sup>(1)</sup>	7361-38	0.287 ± 0.012 [7.3 ± 0.30]	0.236 ± 0.012 [6.0 ± 0.30]	0.138 ± 0.012 [3.5 ± 0.30]	0.047 ± 0.008 [1.2 ± 0.20]	0.122 ± 0.004 [3.1 ± 0.10]	0.069 [1.75]

**Note**

<sup>(1)</sup> Preliminary values. Contact factory for availability.

RATINGS AND CASE CODES									
μF	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V	63 V
0.47							A		
0.68							A		
1.0					A	A	A/B	B/C	
1.5						A	B/C	B/C	
2.2			A	A	A	A/B	B/C	B/C/D	
3.3				A	A/B	A/B	B/C	C/D	
4.7			A	A/B	A/B	A/B/C	B/C/D	C/D/E	D
6.8			A	A/B	A/B	B/C	C/D/E	D/E	
10		A	A/B	A/B/C	B/C	B/C/D	C/D/E	D/E	E
15	A	A	A/B	B/C	B/C	B/C/D	D/E	E	
22	A	A/B	A/B/C	B/C/D	B/C/D	C/D/E/V	D/E		
33	A/B	A/B	B/C	B/C/D	C/D	D/E			
47	A/B	A/B/C	B/C/D	C/D	D/E	D/E			
68	B/C	B/C/D	B/C/D/E/V	D	D/E	W <sup>(1)</sup>			
100	A/B/C	B/C/D/V	B/C/D/E/V	D/E	D/E				
150	B/C/D	C/D/E	C/D/E	D/E					
220	B/C/D	C/D/E	D/E/V	E					
330	D	D/E	D/E/W <sup>(1)</sup>						
470	D/E	D/E	E/W <sup>(1)</sup>						
680	D/E	E							
1000	E	E							

**Note**

<sup>(1)</sup> Preliminary values. Contact factory for availability.

MARKING				
<p style="text-align: center;"><b>A Case</b></p>	<b>“A” CASE VOLTAGE CODE</b>		<p style="text-align: center;"><b>B, C, D, E, V Cases</b></p>	
	<b>VOLTS</b>	<b>CODE</b>		
	4.0	G		
	6.3	J		
	10	A		
	16	C		
	20	D		
	25	E		
35	V			
50	T			

**Marking**

Capacitor marking includes an anode (+) polarity band, capacitance in microfarads and the voltage rating. “A” Case capacitors use a letter code for the voltage and EIA capacitance code.

The Vishay Sprague® trademark is included if space permits. Capacitors rated at 6.3 V are marked 6 V.

A manufacturing date code is marked on all capacitors.

Call the factory for further explanation.



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>4 V<sub>DC</sub> AT + 85 °C; 2.7 V<sub>DC</sub> AT + 125 °C</b>						
15	A	TR3A156(1)004(2)1500	0.6	6	1.500	0.22
22	A	TR3A226(1)004(2)1500	0.9	6	1.500	0.22
33	A	TR3A336(1)004(2)1500	1.3	6	1.500	0.22
33	B	TR3B336(1)004(2)0500	1.3	6	0.500	0.41
47	A	TR3A476(1)004(2)0800	1.9	14	0.800	0.31
47	A	TR3A476(1)004(2)0500	1.9	14	0.500	0.39
47	B	TR3B476(1)004(2)0500	1.9	6	0.500	0.41
68	B	TR3B686(1)004(2)0500	2.7	6	0.500	0.41
68	C	TR3C686(1)004(2)0275	2.7	6	0.275	0.63
100	A	TR3A107M004(2)1000	10.0	30	1.000	0.27
100	B	TR3B107(1)004(2)0450	4.0	8	0.450	0.43
100	C	TR3C107(1)004(2)0225	4.0	6	0.225	0.70
150	B	TR3B157(1)004(2)0900	6.0	14	0.900	0.31
150	B	TR3B157(1)004(2)0500	6.0	14	0.500	0.41
150	B	TR3B157(1)004(2)0400	6.0	14	0.400	0.46
150	C	TR3C157(1)004(2)0250	6.0	12	0.250	0.66
150	D	TR3D157(1)004(2)0150	6.0	8	0.150	1.00
220	B	TR3B227M004(2)1100	8.8	18	1.100	0.28
220	B	TR3B227M004(2)0700	8.8	18	0.700	0.35
220	B	TR3B227M004(2)0500	8.8	18	0.500	0.41
220	B	TR3B227M004(2)0450	8.8	18	0.450	0.43
220	C	TR3C227(1)004(2)0200	8.8	8	0.200	0.74
220	D	TR3D227(1)004(3)0050	8.8	8	0.050	1.73
220	D	TR3D227(1)004(2)0150	8.8	8	0.150	1.00
220	D	TR3D227(1)004(2)0100	8.8	8	0.100	1.22
330	D	TR3D337(1)004(2)0100	13.2	8	0.100	1.22
330	D	TR3D337(1)004(3)0045	13.2	8	0.045	1.83
330	D	TR3D337(1)004(3)0035	13.2	8	0.035	2.07
330	D	TR3D337(1)004(2)0150	13.2	8	0.150	1.00
470	D	TR3D477(1)004(2)0125	18.8	10	0.125	1.10
470	D	TR3D477(1)004(2)0100	18.8	10	0.100	1.22
470	D	TR3D477(1)004(2)0060	18.8	10	0.060	1.58
470	D	TR3D477(1)004(3)0045	18.8	10	0.045	1.83
470	D	TR3D477(1)004(3)0035	18.8	10	0.035	2.07
470	E	TR3E477(1)004(2)0100	18.8	10	0.100	1.28
470	E	TR3E477(1)004(3)0045	18.8	10	0.045	1.91
470	E	TR3E477(1)004(3)0035	18.8	10	0.035	2.17
680	D	TR3D687M004(2)0100	27.2	25	0.100	1.22
680	D	TR3D687M004(3)0060	27.2	25	0.060	1.58
680	E	TR3E687(1)004(2)0100	27.2	12	0.100	1.28
1000	E	TR3E108M004(2)0100	40.0	20	0.100	1.28
<b>6.3 V<sub>DC</sub> AT + 85 °C; 4 V<sub>DC</sub> AT 125 °C</b>						
10	A	TR3A106(1)6R3(2)2000	0.6	6	2.000	0.19
10	A	TR3A106(1)6R3(2)1500	0.6	6	1.500	0.22
15	A	TR3A156(1)6R3(2)2000	0.9	6	2.000	0.19
15	A	TR3A156(1)6R3(2)1000	0.9	6	1.000	0.27
22	A	TR3A226(1)6R3(2)3000	1.4	6	3.000	0.16
22	A	TR3A226(1)6R3(2)2000	1.4	6	2.000	0.19

**Notes**

- Part number definitions:
  - (1) Capacitance tolerance codes: K, M
  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (†) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>6.3 V<sub>DC</sub> AT + 85 °C; 4 V<sub>DC</sub> AT 125 °C</b>						
22	A	TR3A226(1)6R3(2)1000	1.4	6	1.000	0.27
22	A	TR3A226(1)6R3(2)0900	1.4	6	0.900	0.29
22	B	TR3B226(1)6R3(2)0600	1.4	6	0.600	0.38
33	A	TR3A336(1)6R3(2)2000	2.0	14	2.000	0.19
33	A	TR3A336(1)6R3(2)0800	2.0	14	0.800	0.31
33	A	TR3A336(1)6R3(2)0600	2.0	14	0.600	0.35
33	B	TR3B336(1)6R3(2)0450	2.0	6	0.450	0.43
33	B	TR3B336(1)6R3(2)0350	2.0	6	0.350	0.49
33	B	TR3B336(1)6R3(2)0600	2.0	6	0.600	0.38
33	B	TR3B336(1)6R3(2)0500	2.0	6	0.500	0.41
47	A	TR3A476(1)6R3(2)0800	3.0	12	0.800	0.31
47	B	TR3B476(1)6R3(2)0550	3.0	6	0.550	0.39
47	B	TR3B476(1)6R3(2)0500	3.0	6	0.500	0.41
47	B	TR3B476(1)6R3(2)0350	3.0	6	0.350	0.49
47	B	TR3B476(1)6R3(2)0250	3.0	6	0.250	0.58
47	C	TR3C476(1)6R3(2)0300	3.0	6	0.300	0.61
47	C	TR3C476(1)6R3(2)0250	3.0	6	0.250	0.66
68	B	TR3B686(1)6R3(2)0650	4.3	6	0.650	0.36
68	B	TR3B686(1)6R3(2)0550	4.3	6	0.550	0.39
68	B	TR3B686(1)6R3(2)0500	4.3	6	0.500	0.41
68	B	TR3B686(1)6R3(2)0350	4.3	6	0.350	0.49
68	B	TR3B686(1)6R3(2)0250	4.3	6	0.250	0.58
68	C	TR3C686(1)6R3(2)0275	4.3	6	0.275	0.63
68	C	TR3C686(1)6R3(2)0250	4.3	6	0.250	0.66
68	C	TR3C686(1)6R3(2)0200	4.3	6	0.200	0.74
68	D	TR3D686(1)6R3(2)0200	4.3	6	0.200	0.87
68	D	TR3D686(1)6R3(2)0175	4.3	4	0.175	0.93
100	B	TR3B107(1)6R3(2)1500	6.3	15	1.500	0.24
100	B	TR3B107(1)6R3(2)0500	6.3	15	0.500	0.41
100	B	TR3B107(1)6R3(2)0400	6.3	15	0.400	0.46
100	C	TR3C107(1)6R3(2)0300	6.3	6	0.300	0.61
100	C	TR3C107(1)6R3(2)0250	6.3	6	0.250	0.66
100	C	TR3C107(1)6R3(2)0150	6.3	6	0.150	0.86
100	C	TR3C107(1)6R3(2)0125	6.3	6	0.125	0.94
100	D	TR3D107(1)6R3(2)0150	6.3	6	0.150	1.00
100	D	TR3D107(1)6R3(2)0140	6.3	6	0.140	1.04
100	V	TR3V107(1)6R3(3)0200	6.3	8	0.200	0.79
100	V	TR3V107(1)6R3(3)0150	6.3	8	0.150	0.91
150	C	TR3C157(1)6R3(2)0300	9.4	8	0.300	0.61
150	C	TR3C157(1)6R3(2)0200	9.4	8	0.200	0.74
150	D	TR3D157(1)6R3(2)0150	9.4	8	0.150	1.00
150	D	TR3D157(1)6R3(2)0125	9.4	8	0.125	1.10
150	D	TR3D157(1)6R3(2)0075	9.4	8	0.075	1.41
150	D	TR3D157(1)6R3(2)0070	9.4	8	0.070	1.46
150	D	TR3D157(1)6R3(3)0050	9.4	8	0.050	1.73
150	E	TR3E157(1)6R3(2)0100	9.4	8	0.100	1.28
220	C	TR3C227(1)6R3(2)0300	13.9	14	0.300	0.61

**Notes**

- Part number definitions:
  - (1) Capacitance tolerance codes: K, M
  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>6.3 V<sub>DC</sub> AT + 85 °C; 4 V<sub>DC</sub> AT 125 °C</b>						
220	C	TR3C227(1)6R3(2)0250	13.9	14	0.250	0.66
220	C	TR3C227(1)6R3(2)0225	13.9	14	0.225	0.70
220	D	TR3D227(1)6R3(2)0150	13.9	8	0.150	1.00
220	D	TR3D227(1)6R3(2)0100	13.9	8	0.100	1.22
220	D	TR3D227(1)6R3(3)0050	13.9	8	0.050	1.73
220	E	TR3E227(1)6R3(2)0150	13.9	8	0.150	1.05
220	E	TR3E227(1)6R3(2)0100	13.9	8	0.100	1.28
330	D	TR3D337(1)6R3(2)0150	20.8	8	0.150	1.00
330	D	TR3D337(1)6R3(2)0125	20.8	8	0.125	1.10
330	D	TR3D337(1)6R3(2)0100	20.8	8	0.100	1.22
330	D	TR3D337(1)6R3(2)0060	20.8	8	0.060	1.58
330	D	TR3D337(1)6R3(3)0050	20.8	8	0.050	1.73
330	D	TR3D337(1)6R3(3)0045	20.8	8	0.045	1.83
330	D	TR3D337(1)6R3(3)0035	20.8	8	0.035	2.07
330	E	TR3E337(1)6R3(2)0150	20.8	8	0.150	1.05
330	E	TR3E337(1)6R3(2)0100	20.8	8	0.100	1.28
330	E	TR3E337(1)6R3(2)0050	20.8	8	0.050	1.82
470	D	TR3D477(1)6R3(2)0200	29.6	14	0.200	0.87
470	D	TR3D477(1)6R3(2)0150	29.6	14	0.150	1.00
470	D	TR3D477(1)6R3(2)0125	29.6	14	0.125	1.10
470	D	TR3D477(1)6R3(3)0100	29.6	14	0.100	1.22
470	E	TR3E477(1)6R3(2)0100	29.6	10	0.100	1.28
470	E	TR3E477(1)6R3(3)0065	29.6	10	0.065	1.59
470	E	TR3E477(1)6R3(3)0060	29.6	10	0.060	1.66
470	E	TR3E477(1)6R3(3)0050	29.6	10	0.050	1.82
680	E	TR3E687(1)6R3(2)0100	42.8	20	0.100	1.28
1000	E	TR3E108M6R3(2)0200	63.0	30	0.200	0.91
1000	E	TR3E108M6R3(2)0150	63.0	30	0.150	1.05
1000	E	TR3E108M6R3(3)0100	63.0	30	0.100	1.28
<b>10 V<sub>DC</sub> AT + 85 °C; 7 V<sub>DC</sub> AT 125 °C</b>						
2.2	A	TR3A225(1)010(2)6800	0.5	6	6.800	0.11
2.2	A	TR3A225(1)010(2)6000	0.5	6	6.000	0.11
2.2	A	TR3A225(1)010(2)1800	0.5	6	1.800	0.20
4.7	A	TR3A475(1)010(2)3000	0.5	6	3.000	0.16
4.7	A	TR3A475(1)010(2)1500	0.5	6	1.500	0.22
4.7	A	TR3A475(1)010(2)1400	0.5	6	1.400	0.23
4.7	A	TR3A475(1)010(2)1000	0.5	6	1.000	0.27
6.8	A	TR3A685(1)010(2)1800	0.7	6	1.800	0.20
6.8	A	TR3A685(1)010(2)3000	0.7	6	3.000	0.16
10	A	TR3A106(1)010(2)2000	1.0	6	2.000	0.19
10	A	TR3A106(1)010(2)1800	1.0	6	1.800	0.20
10	A	TR3A106(1)010(2)1000	1.0	6	1.000	0.27
10	A	TR3A106(1)010(2)0900	1.0	6	0.900	0.29
10	B	TR3B106(1)010(2)1000	1.0	6	1.000	0.29
10	B	TR3B106(1)010(2)0800	1.0	6	0.800	0.33
10	B	TR3B106(1)010(2)0750	1.0	6	0.750	0.34
15	A	TR3A156(1)010(2)2000	1.5	6	2.000	0.19

**Notes**

- Part number definitions:
  - (1) Capacitance tolerance codes: K, M
  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>10 V<sub>DC</sub> AT + 85 °C; 7 V<sub>DC</sub> AT 125 °C</b>						
15	A	TR3A156(1)010(2)1000	1.5	6	1.000	0.27
15	B	TR3B156(1)010(2)0600	1.5	6	0.600	0.38
15	B	TR3B156(1)010(2)0450	1.5	6	0.450	0.43
15	B	TR3B156(1)010(2)0700	1.5	6	0.700	0.35
22	A	TR3A226(1)010(2)1500	2.2	8	1.500	0.22
22	A	TR3A226(1)010(2)1000	2.2	8	1.000	0.27
22	A	TR3A226(1)010(2)0900	2.2	8	0.900	0.29
22	A	TR3A226(1)010(2)0800	2.2	8	0.800	0.31
22	B	TR3B226(1)010(2)1000	2.2	6	1.000	0.29
22	B	TR3B226(1)010(2)0700	2.2	6	0.700	0.35
22	B	TR3B226(1)010(2)0500	2.2	6	0.500	0.41
22	B	TR3B226(1)010(2)0400	2.2	6	0.400	0.46
22	C	TR3C226(1)010(2)0400	2.2	6	0.400	0.52
22	C	TR3C226(1)010(2)0345	2.2	6	0.345	0.56
22	C	TR3C226(1)010(2)0300	2.2	6	0.300	0.61
33	B	TR3B336(1)010(2)0425	3.3	6	0.425	0.45
33	B	TR3B336(1)010(2)1400	3.3	6	1.400	0.25
33	B	TR3B336(1)010(2)0650	3.3	6	0.650	0.36
33	B	TR3B336(1)010(2)0600	3.3	6	0.600	0.38
33	B	TR3B336(1)010(2)0500	3.3	6	0.500	0.41
33	B	TR3B336(1)010(2)0300	3.3	6	0.300	0.53
33	C	TR3C336(1)010(2)0375	3.3	6	0.375	0.54
33	C	TR3C336(1)010(2)0300	3.3	6	0.300	0.61
47	B	TR3B476(1)010(2)0600	4.7	6	0.600	0.38
47	B	TR3B476(1)010(2)0500	4.7	6	0.500	0.41
47	B	TR3B476(1)010(2)0350	4.7	6	0.350	0.49
47	B	TR3B476(1)010(2)0650	4.7	6	0.650	0.36
47	C	TR3C476(1)010(2)0200	4.7	6	0.200	0.74
47	C	TR3C476(1)010(2)0350	4.7	6	0.350	0.56
47	C	TR3C476(1)010(2)0300	4.7	6	0.300	0.61
47	D	TR3D476(1)010(2)0220	4.7	6	0.220	0.83
47	D	TR3D476(1)010(2)0200	4.7	6	0.200	0.87
47	D	TR3D476(1)010(2)0140	4.7	6	0.140	1.04
47	D	TR3D476(1)010(2)0135	4.7	6	0.135	1.05
47	D	TR3D476(1)010(2)0100	4.7	6	0.100	1.22
68	B	TR3B686(1)010(2)1500	6.8	14	1.500	0.24
68	B	TR3B686(1)010(2)0900	6.8	14	0.900	0.31
68	B	TR3B686(1)010(2)0750	6.8	14	0.750	0.34
68	B	TR3B686(1)010(2)0600	6.8	14	0.600	0.38
68	C	TR3C686(1)010(2)0200	6.8	6	0.200	0.74
68	C	TR3C686(1)010(2)0300	6.8	6	0.300	0.61
68	C	TR3C686(1)010(2)0275	6.8	6	0.275	0.63
68	C	TR3C686(1)010(2)0225	6.8	6	0.225	0.70
68	D	TR3D686(1)010(2)0200	6.8	6	0.200	0.87
68	D	TR3D686(1)010(2)0150	6.8	6	0.150	1.00
68	D	TR3D686(1)010(2)0100	6.8	6	0.100	1.22
68	D	TR3D686(1)010(3)0070	6.8	6	0.070	1.46

Notes

- Part number definitions:
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  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>10 V<sub>DC</sub> AT + 85 °C; 7 V<sub>DC</sub> AT 125 °C</b>						
68	E	TR3E686(1)010(2)0150	6.8	4	0.150	1.05
68	V	TR3V686(1)010(3)0700	6.8	6	0.700	0.42
68	V	TR3V686(1)010(3)0300	6.8	6	0.300	0.65
68	V	TR3V686(1)010(3)0200	6.8	6	0.200	0.79
68	V	TR3V686(1)010(3)0140	6.8	6	0.140	0.94
68	V	TR3V686(1)010(3)0100	6.8	6	0.100	1.12
100	B	TR3B107M010(2)1400	10.0	25	1.400	0.25
100	C	TR3C107(1)010(2)0200	10.0	8	0.200	0.74
100	C	TR3C107(1)010(2)0150	10.0	8	0.150	0.86
100	C	TR3C107(1)010(2)0100	10.0	8	0.100	1.05
100	D	TR3D107(1)010(2)0150	10.0	6	0.150	1.00
100	D	TR3D107(1)010(2)0100	10.0	6	0.100	1.22
100	D	TR3D107(1)010(2)0080	10.0	6	0.080	1.37
100	D	TR3D107(1)010(3)0070	10.0	6	0.070	1.52
100	D	TR3D107(1)010(3)0065	10.0	6	0.065	1.46
100	D	TR3D107(1)010(3)0050	10.0	6	0.050	1.73
100	E	TR3E107(1)010(2)0125	10.0	6	0.125	1.15
100	E	TR3E107(1)010(2)0150	10.0	6	0.150	1.05
100	E	TR3E107(1)010(2)0100	10.0	6	0.100	1.28
100	V	TR3V107(1)010(3)0400	10.0	8	0.400	0.56
100	V	TR3V107(1)010(3)0200	10.0	8	0.200	0.79
100	V	TR3V107(1)010(3)0150	10.0	8	0.150	0.91
150	C	TR3C157M010(2)0500	15.0	20	0.500	0.47
150	D	TR3D157(1)010(2)0150	15.0	8	0.150	1.00
150	D	TR3D157(1)010(2)0100	15.0	8	0.100	1.22
150	D	TR3D157(1)010(2)0075	15.0	8	0.075	1.41
150	D	TR3D157(1)010(3)0070	15.0	8	0.070	1.46
150	D	TR3D157(1)010(3)0050	15.0	8	0.050	1.73
150	E	TR3E157(1)010(2)0100	15.0	8	0.100	1.28
150	E	TR3E157(1)010(2)0080	15.0	8	0.080	1.44
220	D	TR3D227(1)010(2)0150	22.0	8	0.150	1.00
220	D	TR3D227(1)010(2)0125	22.0	8	0.125	1.10
220	D	TR3D227(1)010(2)0100	22.0	8	0.100	1.22
220	D	TR3D227(1)010(3)0050	22.0	8	0.050	1.73
220	E	TR3E227(1)010(2)0150	22.0	8	0.150	1.05
220	E	TR3E227(1)010(2)0100	22.0	8	0.100	1.28
220	E	TR3E227(1)010(3)0070	22.0	8	0.070	1.54
220	E	TR3E227(1)010(3)0060	22.0	8	0.060	1.66
220	E	TR3E227(1)010(3)0050	22.0	8	0.050	1.82
220	V	TR3V227(1)010(3)0200	30.0	12	0.200	0.79
220	V	TR3V227(1)010(3)0150	30.0	12	0.150	0.91
330	D	TR3D337(1)010(2)0150	33.0	15	0.150	1.00
330	D	TR3D337(1)010(2)0125	33.0	15	0.125	1.10
330	D	TR3D337(1)010(2)0100	33.0	15	0.100	1.22
330	E	TR3E337(1)010(2)0100	33.0	10	0.100	1.28
330	E	TR3E337(1)010(3)0060	33.0	10	0.060	1.66
470	E	TR3E477(1)010(2)0200	47.0	15	0.200	0.91

**Notes**

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  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>10 V<sub>DC</sub> AT + 85 °C; 7 V<sub>DC</sub> AT 125 °C</b>						
470	E	TR3E477(1)010(2)0150	47.0	15	0.150	1.05
470	E	TR3E477(1)010(2)0100	47.0	15	0.100	1.28
470	E	TR3E477(1)010(3)0075	47.0	15	0.075	1.48
470	E	TR3E477(1)010(2)0060	47.0	15	0.060	1.66
470	E	TR3E477(1)010(2)0050	47.0	15	0.050	1.82
330 <sup>(1)</sup>	W	TR3W337M010(2)0100	33.0	10	0.100	1.58
470 <sup>(1)</sup>	W	TR3W477M010(2)0050	47.0	14	0.050	2.24
<b>16 V<sub>DC</sub> AT + 85 °C; 10 V<sub>DC</sub> AT + 125 °C</b>						
2.2	A	TR3A225(1)016(2)4000	0.5	6	4.000	0.14
2.2	A	TR3A225(1)016(2)3500	0.5	6	3.500	0.15
2.2	A	TR3A225(1)016(2)1800	0.5	6	1.800	0.20
3.3	A	TR3A335(1)016(2)4000	0.5	6	4.000	0.14
3.3	A	TR3A335(1)016(2)3500	0.5	6	3.500	0.15
4.7	A	TR3A475(1)016(2)3000	0.8	6	3.000	0.16
4.7	A	TR3A475(1)016(2)2500	0.8	6	2.500	0.17
4.7	A	TR3A475(1)016(2)2000	0.8	6	2.000	0.19
4.7	A	TR3A475(1)016(2)1500	0.8	6	1.500	0.22
4.7	B	TR3B475(1)016(2)1500	0.8	6	1.500	0.24
4.7	B	TR3B475(1)016(2)0800	0.8	6	0.800	0.33
6.8	A	TR3A685(1)016(2)3000	1.1	6	3.000	0.16
6.8	A	TR3A685(1)016(2)1500	1.1	6	1.500	0.22
6.8	B	TR3B685(1)016(2)1200	1.1	6	1.200	0.27
6.8	B	TR3B685(1)016(2)0600	1.1	6	0.600	0.38
10	A	TR3A106(1)016(2)1700	1.6	6	1.700	0.21
10	B	TR3B106(1)016(2)0800	1.6	6	0.800	0.33
10	B	TR3B106(1)016(2)0500	1.6	6	0.500	0.41
10	C	TR3C106(1)016(2)0600	1.6	6	0.600	0.43
10	C	TR3C106(1)016(2)0500	1.6	6	0.500	0.47
10	C	TR3C106(1)016(2)0450	1.6	6	0.450	0.49
15	B	TR3B156(1)016(2)0800	2.4	6	0.800	0.33
15	B	TR3B156(1)016(2)0500	2.4	6	0.500	0.41
15	C	TR3C156(1)016(2)0400	2.4	6	0.400	0.52
22	B	TR3B226(1)016(2)1000	3.5	6	1.000	0.29
22	B	TR3B226(1)016(2)0700	3.5	6	0.700	0.35
22	B	TR3B226(1)016(2)0600	3.5	6	0.600	0.38
22	B	TR3B226(1)016(2)0400	3.5	6	0.400	0.46
22	C	TR3C226(1)016(2)0375	3.5	6	0.375	0.54
22	C	TR3C226(1)016(2)0350	3.5	6	0.350	0.56
22	D	TR3D226(1)016(2)0250	3.5	6	0.250	0.77
33	B	TR3B336(1)016(2)0700	5.3	6	0.700	0.35
33	B	TR3B336(1)016(2)0500	5.3	6	0.500	0.41
33	B	TR3B336(1)016(2)0350	5.3	6	0.350	0.49
33	C	TR3C336(1)016(2)0300	5.3	6	0.300	0.61
33	C	TR3C336(1)016(2)0225	5.3	6	0.225	0.70
33	D	TR3D336(1)016(2)0250	5.3	6	0.250	0.77
33	D	TR3D336(1)016(2)0225	5.3	4	0.225	0.82
33	D	TR3D336(1)016(2)0150	5.3	6	0.150	1.00

**Notes**

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  - (2) Terminations and packaging codes: C, D, E, F
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- <sup>(1)</sup> Preliminary values. Contact factory for availability





STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>16 V<sub>DC</sub> AT + 85 °C; 10 V<sub>DC</sub> AT + 125 °C</b>						
47	C	TR3C476(1)016(2)0500	7.5	6	0.500	0.47
47	C	TR3C476(1)016(2)0350	7.5	6	0.350	0.56
47	C	TR3C476(1)016(2)0300	7.5	6	0.300	0.61
47	D	TR3D476(1)016(2)0200	7.5	6	0.200	0.87
47	D	TR3D476(1)016(2)0150	7.5	6	0.150	1.00
47	D	TR3D476(1)016(2)0100	7.5	6	0.100	1.22
68	D	TR3D686(1)016(2)0150	10.9	6	0.150	1.00
68	D	TR3D686(1)016(2)0100	10.9	6	0.100	1.22
68	D	TR3D686(1)016(3)0070	10.9	6	0.070	1.46
100	D	TR3D107(1)016(2)0150	16.0	8	0.150	1.00
100	D	TR3D107(1)016(2)0125	16.0	8	0.125	1.10
100	D	TR3D107(1)016(2)0100	16.0	8	0.100	1.22
100	D	TR3D107(1)016(3)0075	16.0	8	0.075	1.41
100	E	TR3E107(1)016(2)0150	16.0	8	0.150	1.05
100	E	TR3E107(1)016(2)0125	16.0	8	0.125	1.15
100	E	TR3E107(1)016(2)0100	16.0	8	0.100	1.28
150	D	TR3D157(1)016(2)0400	24.0	8	0.400	0.61
150	D	TR3D157(1)016(2)0150	24.0	8	0.150	1.00
150	D	TR3D157(1)016(2)0125	24.0	8	0.125	1.10
150	D	TR3D157(1)016(2)0100	24.0	8	0.100	1.22
150	D	TR3D157(1)016(2)0085	24.0	8	0.085	1.33
150	D	TR3D157(1)016(3)0075	24.0	8	0.075	1.41
150	D	TR3D157(1)016(3)0060	24.0	8	0.060	1.58
150	E	TR3E157(1)016(2)0400	24.0	8	0.400	0.64
150	E	TR3E157(1)016(2)0150	24.0	8	0.150	1.05
150	E	TR3E157(1)016(2)0100	24.0	8	0.100	1.28
150	E	TR3E157(1)016(2)0075	24.0	8	0.075	1.48
150	E	TR3E157(1)016(2)0060	24.0	8	0.060	1.66
220	E	TR3E227(1)016(2)0150	35.2	14	0.150	1.05
220	E	TR3E227(1)016(2)0125	35.2	14	0.125	1.15
220	E	TR3E227(1)016(2)0100	35.2	14	0.100	1.28
<b>20 V<sub>DC</sub> AT + 85 °C; 13 V<sub>DC</sub> AT + 125 °C</b>						
1.0	A	TR3A105(1)020(2)5500	0.5	4	5.500	0.12
1.0	A	TR3A105(1)020(2)3000	0.5	4	3.000	0.16
2.2	A	TR3A225(1)020(2)4000	0.5	6	4.000	0.14
2.2	A	TR3A225(1)020(2)3000	0.5	6	3.000	0.16
3.3	A	TR3A335(1)020(2)4000	0.7	6	4.000	0.14
3.3	B	TR3B335(1)020(2)1300	0.7	6	1.300	0.26
4.7	A	TR3A475(1)020(2)3500	0.9	6	3.500	0.15
4.7	A	TR3A475(1)020(2)1800	0.9	6	1.800	0.20
4.7	B	TR3B475(1)020(2)1000	0.9	6	1.000	0.29
4.7	B	TR3B475(1)020(2)0750	0.9	6	0.750	0.34
6.8	A	TR3A685(1)020(2)3200	1.4	6	3.200	0.15
6.8	A	TR3A685(1)020(2)3000	1.4	6	3.000	0.16
6.8	A	TR3A685(1)020(2)2600	1.4	6	2.600	0.17
6.8	B	TR3B685(1)020(2)1000	1.4	6	1.000	0.29
6.8	B	TR3B685(1)020(2)0600	1.4	6	0.600	0.38

**Notes**

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- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>20 V<sub>DC</sub> AT + 85 °C; 13 V<sub>DC</sub> AT + 125 °C</b>						
10	B	TR3B106(1)020(2)1000	2.0	6	1.000	0.29
10	B	TR3B106(1)020(2)0500	2.0	6	0.500	0.41
10	C	TR3C106(1)020(2)0700	2.0	6	0.700	0.40
10	C	TR3C106(1)020(2)0500	2.0	6	0.500	0.47
10	C	TR3C106(1)020(2)0475	2.0	6	0.475	0.48
10	C	TR3C106(1)020(2)0450	2.0	6	0.450	0.49
10	C	TR3C106(1)020(2)0400	2.0	6	0.400	0.52
15	B	TR3B156(1)020(2)1000	3.0	6	1.000	0.29
15	B	TR3B156(1)020(2)0500	3.0	6	0.500	0.41
15	C	TR3C156(1)020(2)0400	3.0	6	0.400	0.52
22	B	TR3B226(1)020(2)0800	4.4	6	0.800	0.33
22	B	TR3B226(1)020(2)0600	4.4	6	0.600	0.38
22	B	TR3B226(1)020(2)0400	4.4	6	0.400	0.46
22	C	TR3C226(1)020(2)0400	4.4	6	0.400	0.52
22	C	TR3C226(1)020(2)0375	4.4	6	0.375	0.54
22	D	TR3D226(1)020(2)0300	4.4	6	0.300	0.71
22	D	TR3D226(1)020(2)0225	4.4	4	0.225	0.82
22	D	TR3D226(1)020(2)0200	4.4	6	0.200	0.87
33	C	TR3C336(1)020(2)0350	6.6	6	0.350	0.56
33	C	TR3C336(1)020(2)0300	6.6	6	0.300	0.61
33	C	TR3C336(1)020(2)0200	6.6	6	0.200	0.74
33	D	TR3D336(1)020(2)0400	6.6	6	0.400	0.61
33	D	TR3D336(1)020(2)0250	6.6	6	0.250	0.77
33	D	TR3D336(1)020(2)0200	6.6	6	0.200	0.87
47	D	TR3D476(1)020(2)0200	9.4	6	0.200	0.87
47	D	TR3D476(1)020(2)0175	9.4	6	0.175	0.93
47	D	TR3D476(1)020(2)0150	9.4	6	0.150	1.00
47	D	TR3D476(1)020(3)0100	9.4	6	0.100	1.22
47	E	TR3E476(1)020(2)0150	9.4	6	0.150	1.05
47	E	TR3E476(1)020(3)0125	9.4	6	0.125	1.15
68	D	TR3D686(1)020(2)0200	13.6	6	0.200	0.87
68	D	TR3D686(1)020(2)0175	13.6	6	0.175	0.93
68	D	TR3D686(1)020(2)0150	13.6	6	0.150	1.00
68	D	TR3D686(1)020(2)0115	13.6	6	0.115	1.14
68	E	TR3E686(1)020(2)0200	13.6	6	0.200	0.91
68	E	TR3E686(1)020(2)0150	13.6	6	0.150	1.05
68	E	TR3E686(1)020(2)0125	13.6	6	0.125	1.15
68	E	TR3E686(1)020(2)0120	13.6	6	0.120	1.17
100	D	TR3D107(1)020(2)0200	20.0	8	0.200	0.87
100	D	TR3D107(1)020(2)0150	20.0	8	0.150	1.00
100	D	TR3D107(1)020(2)0100	20.0	8	0.100	1.22
100	D	TR3D107(1)020(3)0080	20.0	8	0.080	1.37
100	D	TR3D107(1)020(3)0085	20.0	8	0.085	1.33
100	E	TR3E107(1)020(2)0200	20.0	8	0.200	0.91
100	E	TR3E107(1)020(2)0150	20.0	8	0.150	1.05
100	E	TR3E107(1)020(2)0100	20.0	8	0.100	1.28

**Notes**

- Part number definitions:
  - (1) Capacitance tolerance codes: K, M
  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>25 V<sub>DC</sub> AT + 85 °C; 17 V<sub>DC</sub> AT + 125 °C</b>						
1.0	A	TR3A105(1)025(2)4000	0.5	4	4.000	0.14
1.5	A	TR3A155(1)025(2)4000	0.5	6	4.000	0.14
1.5	A	TR3A155(1)025(2)3000	0.5	6	3.000	0.16
2.2	A	TR3A225(1)025(2)4000	0.6	6	4.000	0.14
2.2	B	TR3B225(1)025(2)1500	0.6	6	1.500	0.24
2.2	B	TR3B225(1)025(2)1200	0.6	6	1.200	0.27
2.2	B	TR3B225(1)025(2)0900	0.6	6	0.900	0.31
3.3	A	TR3A335(1)025(2)3500	0.8	6	3.500	0.15
3.3	A	TR3A335(1)025(2)3000	0.8	6	3.000	0.16
3.3	B	TR3B335(1)025(2)2000	0.8	6	2.000	0.21
3.3	B	TR3B335(1)025(2)1500	0.8	6	1.500	0.24
3.3	B	TR3B335(1)025(2)0750	0.8	6	0.750	0.34
4.7	A	TR3A475(1)025(2)3500	1.2	6	3.500	0.15
4.7	A	TR3A475(1)025(2)3000	1.2	6	3.000	0.16
4.7	B	TR3B475(1)025(2)1500	1.2	6	1.500	0.29
4.7	B	TR3B475(1)025(2)1000	1.2	6	1.000	0.10
4.7	B	TR3B475(1)025(2)0900	1.2	6	0.900	0.24
4.7	B	TR3B475(1)025(2)0700	1.2	6	0.700	0.35
4.7	C	TR3C475(1)025(2)0600	1.2	6	0.600	0.43
4.7	C	TR3C475(1)025(2)0525	1.2	6	0.525	0.46
6.8	B	TR3B685(1)025(2)2000	1.7	6	2.000	0.21
6.8	B	TR3B685(1)025(2)1500	1.7	6	1.500	0.24
6.8	B	TR3B685(1)025(2)1200	1.7	6	1.200	0.27
6.8	B	TR3B685(1)025(2)0700	1.7	6	0.700	0.35
6.8	B	TR3B685(1)025(3)0500	1.7	6	0.500	0.41
6.8	B	TR3B685(1)025(3)0400	1.7	6	0.400	0.46
6.8	C	TR3C685(1)025(2)0600	1.7	6	0.600	0.43
6.8	C	TR3C685(1)025(2)0500	1.7	6	0.500	0.47
10	B	TR3B106(1)025(2)1300	2.5	6	1.300	0.26
10	B	TR3B106(1)025(2)1100	2.5	6	1.100	0.28
10	B	TR3B106(1)025(2)0450	2.5	6	0.450	0.43
10	C	TR3C106(1)025(2)0600	2.5	6	0.600	0.43
10	C	TR3C106(1)025(2)0500	2.5	6	0.500	0.47
10	C	TR3C106(1)025(2)0450	2.5	6	0.450	0.49
10	C	TR3C106(1)025(2)0300	2.5	6	0.300	0.61
10	D	TR3D106(1)025(2)0400	2.5	6	0.400	0.61
10	D	TR3D106(1)025(2)0300	2.5	6	0.300	0.71
15	B	TR3B156(1)025(2)1000	3.8	6	1.000	0.29
15	B	TR3B156(1)025(2)0800	3.8	6	0.800	0.33
15	B	TR3B156(1)025(2)0600	3.8	6	0.600	0.38
15	C	TR3C156(1)025(2)0900	3.8	6	0.900	0.35
15	C	TR3C156(1)025(2)0425	3.8	6	0.425	0.51
15	D	TR3D156(1)025(2)0350	3.8	6	0.350	0.65
15	D	TR3D156(1)025(2)0275	3.8	6	0.275	0.74
15	D	TR3D156(1)025(2)0250	3.8	6	0.250	0.77
15	D	TR3D156(1)025(2)0200	3.8	6	0.200	0.87
22	C	TR3C226(1)025(2)1000	5.5	6	1.000	0.33

**Notes**

- Part number definitions:
  - (1) Capacitance tolerance codes: K, M
  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>25 V<sub>DC</sub> AT + 85 °C; 17 V<sub>DC</sub> AT + 125 °C</b>						
22	C	TR3C226(1)025(2)0900	5.5	6	0.900	0.35
22	C	TR3C226(1)025(2)0425	5.5	6	0.425	0.52
22	C	TR3C226(1)025(2)0400	5.5	6	0.400	0.51
22	C	TR3C226(1)025(2)0300	5.5	6	0.300	0.61
22	C	TR3C226(1)025(2)0275	5.5	6	0.275	0.63
22	C	TR3C226(1)025(2)0250	5.5	6	0.250	0.66
22	D	TR3D226(1)025(2)0300	5.5	6	0.300	0.71
22	D	TR3D226(1)025(2)0200	5.5	6	0.200	0.87
22	E	TR3E226(1)025(2)0300	5.5	6	0.300	0.74
22	E	TR3E226(1)025(2)0200	5.5	6	0.200	0.91
22	V	TR3V226(1)025(3)0500	5.5	6	0.500	0.50
22	V	TR3V226(1)025(3)0400	5.5	6	0.400	0.56
22	V	TR3V226(1)025(3)0250	5.5	6	0.250	0.71
33	D	TR3D336(1)025(2)0400	8.3	6	0.400	0.61
33	D	TR3D336(1)025(2)0300	8.3	6	0.300	0.71
33	D	TR3D336(1)025(2)0225	8.3	6	0.225	0.82
33	D	TR3D336(1)025(2)0200	8.3	6	0.200	0.87
33	E	TR3E336(1)025(2)0300	8.3	6	0.300	0.74
33	E	TR3E336(1)025(2)0200	8.3	6	0.200	0.91
33	E	TR3E336(1)025(2)0175	8.3	4	0.175	0.97
47	D	TR3D476(1)025(2)0350	11.8	8	0.350	0.65
47	D	TR3D476(1)025(2)0250	11.8	8	0.250	0.77
47	D	TR3D476(1)025(2)0200	11.8	8	0.200	0.87
47	D	TR3D476(1)025(2)0150	11.8	8	0.150	1.00
47	D	TR3D476(1)025(3)0125	11.8	8	0.125	1.10
47	D	TR3D476(1)025(3)0100	11.8	8	0.100	1.22
47	E	TR3E476(1)025(2)0300	11.8	6	0.300	0.74
47	E	TR3E476(1)025(2)0200	11.8	6	0.200	0.91
47	E	TR3E476(1)025(2)0150	11.8	8	0.150	1.05
47	E	TR3E476(1)025(3)0125	11.8	8	0.125	1.15
47	E	TR3E476(1)025(3)0100	11.8	8	0.100	1.28
68 <sup>(1)</sup>	W	TR3W686M025(2)0095	17.0	6	0.095	1.62
<b>35 V<sub>DC</sub> AT + 85 °C; 23 V<sub>DC</sub> AT + 125 °C</b>						
0.47	A	TR3A474(1)035(2)4000	0.5	4	4.000	0.14
0.68	A	TR3A684(1)035(2)6000	0.5	4	6.000	0.11
0.68	A	TR3A684(1)035(2)4000	0.5	4	4.000	0.14
1.0	A	TR3A105(1)035(2)6000	0.5	4	6.000	0.11
1.0	A	TR3A105(1)035(2)4000	0.5	4	4.000	0.14
1.0	A	TR3A105(1)035(2)3000	0.5	4	3.000	0.16
1.0	B	TR3B105(1)035(2)2000	0.5	4	2.000	0.21
1.0	B	TR3B105(1)035(2)1700	0.5	4	1.700	0.22
1.0	B	TR3B105(1)035(2)1500	0.5	4	1.500	0.24
1.5	B	TR3B155(1)035(2)3000	0.5	6	3.000	0.17
1.5	B	TR3B155(1)035(2)2000	0.5	6	2.000	0.21
1.5	C	TR3C155(1)035(2)2500	0.5	6	2.500	0.21
1.5	C	TR3C155(1)035(2)0900	0.5	6	0.900	0.35
2.2	B	TR3B225(1)035(2)2500	0.8	6	2.500	0.18

**Notes**

- Part number definitions:
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  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (1) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>35 V<sub>DC</sub> AT + 85 °C; 23 V<sub>DC</sub> AT + 125 °C</b>						
2.2	B	TR3B225(1)035(2)2000	0.8	6	2.000	0.21
2.2	B	TR3B225(1)035(2)1500	0.8	6	1.500	0.24
2.2	C	TR3C225(1)035(2)1500	0.8	6	1.500	0.27
2.2	C	TR3C225(1)035(2)0900	0.8	6	0.900	0.35
3.3	B	TR3B335(1)035(2)1500	1.2	6	1.500	0.24
3.3	B	TR3B335(1)035(2)1000	1.2	6	1.000	0.29
3.3	C	TR3C335(1)035(2)0800	1.2	6	0.800	0.37
3.3	C	TR3C335(1)035(2)0700	1.2	6	0.700	0.40
3.3	C	TR3C335(1)035(2)0600	1.2	6	0.600	0.43
4.7	B	TR3B475(1)035(2)1500	1.6	6	1.500	0.24
4.7	B	TR3B475(1)035(2)1000	1.6	6	1.000	0.29
4.7	B	TR3B475(1)035(2)0700	1.6	6	0.700	0.35
4.7	C	TR3C475(1)035(2)0700	1.6	6	0.700	0.40
4.7	C	TR3C475(1)035(2)0600	1.6	6	0.600	0.43
4.7	C	TR3C475(1)035(2)0500	1.6	6	0.500	0.47
4.7	D	TR3D475(1)035(2)0700	1.6	6	0.700	0.46
6.8	C	TR3C685(1)035(2)0900	2.4	6	0.900	0.35
6.8	C	TR3C685(1)035(2)0475	2.4	6	0.475	0.48
6.8	D	TR3D685(1)035(2)0500	2.4	6	0.500	0.55
6.8	D	TR3D685(1)035(2)0400	2.4	6	0.400	0.61
6.8	D	TR3D685(1)035(2)0300	2.4	6	0.300	0.71
6.8	E	TR3E685(1)035(2)0300	2.4	4	0.300	0.74
10	C	TR3C106(1)035(2)1200	3.5	6	1.200	0.30
10	C	TR3C106(1)035(2)0450	3.5	6	0.450	0.49
10	D	TR3D106(1)035(2)0400	3.5	6	0.400	0.61
10	D	TR3D106(1)035(2)0300	3.5	6	0.300	0.71
10	D	TR3D106(1)035(2)0260	3.5	6	0.260	0.76
10	D	TR3D106(1)035(2)0250	3.5	6	0.250	0.77
10	D	TR3D106(1)035(2)0200	3.5	6	0.200	0.87
10	D	TR3D106(1)035(3)0135	3.5	6	0.135	1.05
10	D	TR3D106(1)035(3)0125	3.5	6	0.125	1.10
10	E	TR3E106(1)035(2)0250	3.5	6	0.250	0.81
10	E	TR3E106(1)035(2)0200	3.5	6	0.200	0.91
15	D	TR3D156(1)035(2)0350	5.3	6	0.350	0.65
15	D	TR3D156(1)035(2)0300	5.3	6	0.300	0.71
15	D	TR3D156(1)035(2)0260	5.3	6	0.260	0.76
15	D	TR3D156(1)035(2)0225	5.3	6	0.225	0.82
15	D	TR3D156(1)035(2)0200	5.3	6	0.200	0.87
15	D	TR3D156(1)035(2)0150	5.3	6	0.150	1.00
15	E	TR3E156(1)035(2)0300	5.3	6	0.300	0.74
15	E	TR3E156(1)035(2)0225	5.3	6	0.225	0.86
15	E	TR3E156(1)035(2)0200	5.3	6	0.200	0.91
15	E	TR3E156(1)035(2)0150	5.3	6	0.150	1.05
22	D	TR3D226(1)035(2)0400	7.7	6	0.400	0.61
22	D	TR3D226(1)035(2)0300	7.7	6	0.300	0.71
22	D	TR3D226(1)035(2)0275	7.7	6	0.275	0.74
22	D	TR3D226(1)035(2)0250	7.7	6	0.250	0.77

**Notes**

- Part number definitions:
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  - (2) Terminations and packaging codes: C, D, E, F
  - (3) Lead (Pb)-free terminations and packaging codes: C, D
- (†) Preliminary values. Contact factory for availability



STANDARD RATINGS						
CAPACITANCE ( $\mu$ F)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C ( $\mu$ A)	MAX. DF AT + 25 °C 120 Hz (%)	MAX. ESR AT + 25 °C 100 kHz ( $\Omega$ )	MAX. RIPPLE 100 kHz $I_{RMS}$ (A)
<b>35 V<sub>DC</sub> AT + 85 °C; 23 V<sub>DC</sub> AT + 125 °C</b>						
22	D	TR3D226(1)035(2)0200	7.7	6	0.200	0.87
22	E	TR3E226(1)035(2)0300	7.7	6	0.300	0.74
22	E	TR3E226(1)035(2)0275	7.7	6	0.275	0.77
22	E	TR3E226(1)035(2)0260	7.7	6	0.260	0.80
22	E	TR3E226(1)035(2)0200	7.7	6	0.200	0.91
<b>50 V<sub>DC</sub> AT + 85 °C; 33 V<sub>DC</sub> AT + 125 °C</b>						
1.0	B	TR3B105(1)050(2)4000	0.5	4	4.000	0.15
1.0	B	TR3B105(1)050(2)2000	0.5	4	2.000	0.21
1.0	C	TR3C105(1)050(2)1600	0.5	4	1.600	0.26
1.5	B	TR3B155(1)050(2)2000	0.8	6	2.000	0.21
1.5	C	TR3C155(1)050(2)1500	0.8	6	1.500	0.27
2.2	B	TR3B225(1)050(2)2000	1.1	6	2.000	0.21
2.2	C	TR3C225(1)050(2)1500	1.1	6	1.500	0.27
2.2	D	TR3D225(1)050(2)0800	1.1	6	0.800	0.43
3.3	C	TR3C335(1)050(2)1500	1.7	6	1.500	0.27
3.3	D	TR3D335(1)050(2)0800	1.7	6	0.800	0.43
4.7	C	TR3C475(1)050(2)1000	2.4	6	1.000	0.33
4.7	C	TR3C475(1)050(2)0700	2.4	6	0.700	0.40
4.7	C	TR3C475(1)050(2)0500	2.4	6	0.500	0.47
4.7	D	TR3D475(1)050(2)0700	2.4	6	0.700	0.46
4.7	D	TR3D475(1)050(2)0600	2.4	6	0.600	0.50
4.7	D	TR3D475(1)050(2)0500	2.4	6	0.500	0.55
4.7	D	TR3D475(1)050(2)0300	2.4	6	0.300	0.71
4.7	E	TR3E475(1)050(2)0600	2.4	4	0.600	0.52
4.7	E	TR3E475(1)050(2)0300	2.4	4	0.300	0.74
6.8	D	TR3D685(1)050(2)0700	3.4	6	0.700	0.46
6.8	D	TR3D685(1)050(2)0600	3.4	6	0.600	0.50
6.8	D	TR3D685(1)050(2)0500	3.4	6	0.500	0.55
6.8	D	TR3D685(1)050(2)0300	3.4	6	0.300	0.71
6.8	E	TR3E685(1)050(2)0550	3.4	6	0.550	0.55
6.8	E	TR3E685(1)050(2)0500	3.4	6	0.500	0.57
10	D	TR3D106(1)050(2)0700	5.0	6	0.700	0.46
10	D	TR3D106(1)050(2)0550	5.0	6	0.550	0.52
10	D	TR3D106(1)050(2)0450	5.0	6	0.450	0.58
10	E	TR3E106(1)050(2)0700	5.0	6	0.700	0.49
10	E	TR3E106(1)050(2)0550	5.0	6	0.550	0.55
10	E	TR3E106(1)050(2)0500	5.0	6	0.500	0.57
10	E	TR3E106(1)050(2)0400	5.0	6	0.400	0.64
10	E	TR3E106(1)050(2)0300	5.0	6	0.300	0.74
15	E	TR3E156(1)050(2)0400	7.5	6	0.400	0.64
15	E	TR3E156(1)050(3)0300	7.5	6	0.300	0.74
<b>63 V<sub>DC</sub> AT + 85 °C; 40 V<sub>DC</sub> AT + 125 °C</b>						
4.7	D	TR3D475(1)063(2)0700	3.0	6	0.700	0.46
10	E	TR3E106(1)063(2)0600	6.3	6	0.600	0.52

**Notes**

- Part number definitions:
  - Capacitance tolerance codes: K, M
  - Terminations and packaging codes: C, D, E, F
  - Lead (Pb)-free terminations and packaging codes: C, D
- Preliminary values. Contact factory for availability



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TR3

Vishay Sprague

RECOMMENDED VOLTAGE DERATING GUIDELINES (for temperatures below + 85 °C)	
STANDARD CONDITIONS. FOR EXAMPLE: OUTPUT FILTERS	
Capacitor Voltage Rating	Operating Voltage
4.0	2.5
6.3	3.6
10	6.0
16	10
20	12
25	15
35	24
50	28
63	38
SEVERE CONDITIONS. FOR EXAMPLE: INPUT FILTERS	
Capacitor Voltage Rating	Operating Voltage
4.0	2.5
6.3	3.3
10	5.0
16	8.0
20	10
25	12
35	15
50	24
63	32

