

## Miniature Aluminum Electrolytic Capacitors

Classification	Series	Configuration	Applications	Category Temperature Range (°C)	Features					Rated Voltage Range (V.D.C)	Rated Capacitance Range (µF)	Tolerance on Rated Capacitance (%)	Page
					Standard type	Smaller-sized & low profile	Low impedance	Long life	Anti-cleaning solvent				
Ultra-Miniature type	MA	04	5mmL, Standard, For General Purposes	-40 to +85	●				●	4 to 50	0.1 to 470	±20	109
	MP	04	5mmL, Bi-Polarized	-40 to +85	●				●	6.3 to 50	0.1 to 47	±20	110
	MT	04	5mmL, Wide Temperature Range	-55 to +105	●				●	4 to 50	0.1 to 100	±20	111
	MF	04	5mmL, Low Impedance	-55 to +105			●		●	6.3 to 35	1 to 100	±20	112
	MV	04	5mmL, Long Life Assurance	-40 to +105				●		4 to 50	0.1 to 100	±20	113
	SA	04	7mmL, For General Purposes	-40 to +85	●				●	6.3 to 50	0.1 to 220	±20	114
	SR	04	7mmL, High C / V	-40 to +85		●			●	4 to 50	0.1 to 470	±20	114
	SP	04	7mmL, Bi-Polarized	-40 to +85	●				●	6.3 to 50	0.1 to 220	±20	115
	ST	04	7mmL, Wide Temperature Range	-55 to +105	●				●	6.3 to 50	0.1 to 220	±20	116
	SV	04	7mmL, Long Life Assurance	-40 to +105				●		6.3 to 50	0.1 to 220	±20	117
	SF	04	7mmL, Low Impedance	-55 to +105			●		●	6.3 to 35	6.8 to 220	±20	118
Standard type	VK	04	Miniature Sized, Standard	-40 (-25) to +85		●			▲	6.3 to 450	0.1 to 68000	±20	120
	VR	04	Standard	-40 (-25) to +85	●				▲	6.3 to 450	0.1 to 33000	±20	122
	VX	02	Standard, For General Purposes	-40 (-25) to +85	●				▲	6.3 to 450	0.47 to 10000	±20	124
	VY	04	Miniature Sized, Wide Temperature Range	-55 (-40, -25) to +105		●			▲	6.3 to 450	0.1 to 68000	±20	126
	VZ	04	Wide Temperature Range	-55 (-40, -25) to +105	●				▲	6.3 to 450	0.1 to 33000	±20	128
	RS	04	Compact & Standard For General Purposes	-40 to +85		●			▲	6.3 to 400	0.1 to 10000	±20	130
	RZ	04	Low-Profile Sized, Wide Temperature Range	-55 (-40) to +105		●			▲	6.3 to 400	0.1 to 10000	±20	132
	RU	04	12.5mmL	-40 (-25) to +85		●			▲	6.3 to 450	6.8 to 6800	±20	134
	RY	04	12.5mmL Wide Temperature Range	-55 (-40, -25) to +105		●			▲	6.3 to 450	6.8 to 4700	±20	136
	VP	04	Bi-Polarized	-40 to +85	●				●	6.3 to 100	0.47 to 6800	±20	138
	EP	04	Bi-Polarized, Wide Temperature Range	-55 to +105	●				●	6.3 to 100	0.47 to 6800	±20	119
	High Reliability type	PM	04	Extremely Low Impedance, High Reliability	-55 (-40, -25) to +105			●	●	▲	6.3 to 450	0.47 to 15000	±20
PW		04	Miniature Sized, Low Impedance, High Reliability	-55 (-40, -25) to +105		●	●	●	▲	6.3 to 450	0.47 to 15000	±20	147
TT		04	Miniature Sized, Low Impedance, High Reliability	-40 to +105		●	●	●	●	6.3 to 50	1 to 470	±20	152
PA		04	Miniature Sized, Low Impedance, High Reliability	-55 to +105		●	●	●	●	6.3 to 35	180 to 10000	±20	154
HV		04	Extremely Low Impedance, High Reliability	-40 to +105		●	●	●	●	6.3 to 35	47 to 8200	±20	156
HD		04	Extremely Low Impedance, High Reliability	-40 to +105		●	●		●	6.3 to 50	22 to 6800	±20	160
HC		04	Extremely Low Impedance, High Reliability	-40 to +105		●	●		●	6.3 to 35	4.7 to 1000	±20	158
HE		04	Extremely Low Impedance, High Reliability	-40 to +105		●	●	●	●	6.3 to 100	0.47 to 18000	±20	163
HM		04	Extremely Low Impedance, High Reliability, For PC motherboard	-40 to +105		●	●		●	6.3 to 16	330 to 12000	±20	168
HN		04	Extremely Low Impedance, High Reliability, For PC motherboard	-25 to +105		●	●		●	6.3 to 16	330 to 8200	±20	169
HZ		04	Extremely Low Impedance, For PC motherboard	-25 to +105		●	●		●	6.3 to 16	470 to 3300	±20	170
PJ		04	Low Impedance, For Switching Power Supplies	-55 (-40, -25) to +105	●		●	●	▲	6.3 to 450	0.47 to 15000	±20	171
PS		04	Miniature Sized, Low Impedance, For Switching Power Supplies	-55 (-40, -25) to +105		●	●		▲	6.3 to 450	0.47 to 15000	±20	178
TS		04	Miniature Sized, For Switching Power Supplies	-40 to +105		●		●	●	6.3 to 50	0.1 to 470	±20	180
PV		04	Miniature Sized, Low Impedance, High Reliability	-55 to +105			●	●	●	6.3 to 50	0.47 to 390	±20	182
PT		04	Miniature Sized, High Ripple Current, Long Life	-25 to +105		●		●		200 to 450	15 to 820	±20	184
PZ		04	High voltage, Smaller-Sized	-25 to +105		●				200 to 450	18 to 470	±20	186
PB		04	Miniature Sized, High Ripple Current, High Reliability	-40 (-25) to +105		●		●	▲	10 to 450	0.47 to 3300	±20	188
CA		04	Miniature Sized, High Ripple Current, Long Life	-25 to +105		●		●		160 to 450	6.8 to 220	±20	190
CS		04	Miniature Sized, High Ripple Current, High Reliability	-40 (-25) to +105		●		●		160 to 450	6.8 to 330	±20	192
CY		04	Miniature Sized, High Ripple Current, High Reliability	-40 to +105		●		●		160 to 400	6.8 to 560	±20	194
PX		04	Long Life Assurance, High Reliability	-55 to +105			●	●	●	10 to 35	1 to 4700	±20	196
BT	04	High Temperature Range, For Industrial equipment (125°C)	-40 (-25) to +125				●	▲	10 to 450	1 to 4700	±20	198	
BW	04	High Temperature Range, For Industrial equipment (135°C)	-55 to +135				●	●	10 to 100	1 to 4700	±20	200	
BX	04	High Temperature Range, For Automobile equipment (150°C)	-55 (-40, -25) to +150				●	●	10 to 400	1 to 4700	±20	202	

Above description is a feature against AK-225AES.  
▲ : Applicable up to 100V ratings or less.

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					Standard type	Smaller-sized & low profile	Low impedance	Long life	Anti-cleaning solvent				
Special equipment	<b>KL</b>	04	Low Leakage Current	-40 to +85	●				●	6.3 to 100	0.1 to 10000	±20, ±10	204
	<b>TM</b>	04	Timer Circuit Use	-40 to +85	●				●	10 to 50	1 to 470	±20, ±10	206
	<b>JB</b>	04	Memory Back-Up Use	-25 to +85	●				●	5.5	2.2mF to 47mF	-10 to +50	207
	<b>AQ</b>	04	For Permissible Abnormal Voltage	-40 to +105						200 · 400	10 to 220	±20	208
	<b>AS</b>	04	Miniature Type, For Permissible Abnormal Voltage	-40 to +105		●				200	33 to 330	±20	209
For audio equipment	<b>KZ</b>	04	Premium Grade Type, For Audio Equipment	-40 to +85					●	25 to 100	10 to 1000	±20	210
	<b>FG</b>	04	High Grade Type, For Audio Equipment	-40 to +85	●				●	6.3 to 100	0.1 to 10000	±20	212
	<b>KW</b>	04	Standard, For Audio Equipment	-40 to +85	●				●	6.3 to 100	0.1 to 33000	±20	211
	<b>FW</b>	04	Standard, For Audio Equipment	-40 to +85		●			●	6.3 to 100	0.1 to 33000	±20	214
	<b>SW</b>	04	7mmL, For Audio Equipment	-40 to +85	●				●	6.3 to 50	0.1 to 220	±20	216
	<b>MW</b>	04	5mmL, For General Audio Equipment	-40 to +85	●				●	4 to 50	0.1 to 470	±20	217
	<b>UQ</b>	32	105°C Chip Type, For Audio Equipment	-40 to +105					●	6.3 to 50	0.1 to 1000	±20	218
	<b>ES</b>	04	Bi-Polarized, For Audio Equipment	-40 to +85	●				●	6.3 to 50	0.47 to 1000	±20	220
	<b>DB, GB</b>	04	Bi-Polarized, For Speaker Network	-40 to +85	●				●	50	1 to 68	±20, ±10	221
	<b>KT</b>	04	105°C Standard, For Audio Equipment	-55 to +105	●				●	6.3 to 50	0.1 to 33000	±20	222

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