

Conductive Polymer Aluminum Solid Capacitor (SMT)



PECS Series

MERITEK

FEATURES

- Low ESR, surface mounting, reduced height, wide temperature range.
- Suitable for DC-DC converters, voltage regulators and decoupling applications.
- Rated voltage: 2.0Vdc ~6.3Vdc
- Endurance: 1000 hours at 105°C
- RoHS compliant



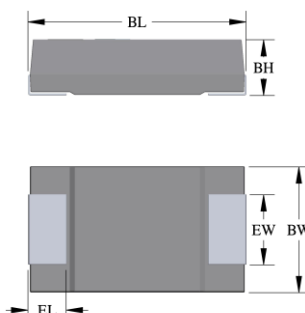
SPECIFICATIONS

Item	Characteristic	
Category Temperature Range	-55°C ~ +105°C	
Rated Voltage Range	2.0V _{DC} ~ 6.3V _{DC}	
Capacitance Tolerance	M=±20%, Y=+10%~-35%	at 120Hz, 20°C
Leakage Current	$I \leq 0.06CV$ (2.0V _{DC} ~ 4.0V _{DC}) $I \leq 0.04CV$ (6.3V _{DC}) at 20°C after 2 minutes	I : Leakage Current (μA) C : Rated Capacitance(μF) V : Rated Voltage (V)
Surge Voltage	Rated voltage x 1.25V	at -55°C ~ +105°C
Dissipation Factor (tan δ)	Case height: S type, 0.06 (max) H type, 0.1 (max)	at 120Hz, 20°C
Endurance	Appearance: No significant damage Capacitance change: ±10% of the initial value DF(tanδ): within initial limit Leakage current: within initial limit	at +105°C rated voltage applied, 1000hours
Damp Heat, Steady State	Appearance: No significant damage Capacitance change: +70%, -20% of the initial value DF(tanδ): ≤200% of the initial limit Leakage current: within initial limit	at +60°C 90%~ 95% R.H., 500hours
Damp Heat, Steady State, Applied Voltage	Appearance: No significant damage Capacitance change: +70%, -20% of the initial value DF(tanδ): ≤200% of the initial limit Leakage current: within initial limit	at +60°C 90%~ 95% R.H. rated voltage, 500hours
Surge Voltage	Appearance: No significant damage Capacitance change: ±10% of the initial value DF(tanδ): within initial limit Leakage current: within initial limit	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages, 125% rated voltage, at 105°C for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30seconds

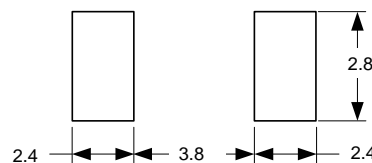
DIMENSIONS

Case Size	U	H	S	
DIM	BL	7.3±0.3	7.3±0.3	7.3±0.3
	BW	4.3±0.3	4.3±0.3	4.3±0.3
	EW	2.4±0.2	2.4±0.2	2.4±0.2
	BH	4.0±0.2	2.8±0.2	1.9±0.2
	EL	1.3±0.2	1.3±0.2	1.3±0.2

All Dimensions in mms



PAD LAYOUT(mm)



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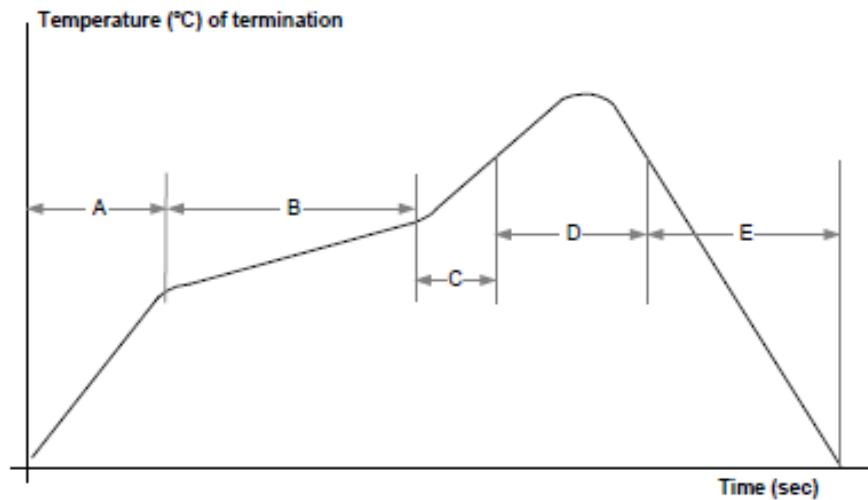
ELECTRICAL CHARACTERISTICS

Item	Working Voltage	Capacitance	Tolerance	tan ϕ	Leakage Current	ESR ¹	Rated Ripple Current ²
	(VDC)	(μ F)			(μ A)	(m Ω) MAX	(mA _{rms})
PECS2R0101Mxxxx	2.0	100	$\pm 20\%$	0.06	12.0	18.0	2.5
PECS2R0221Mxxxx	2.0	220	$\pm 20\%$	0.06	6.4	15.0	2.7
PECS2R0221Mxxxx	2.0	220	$\pm 20\%$	0.06	26.4	9.0	3.0
PECS2R0331Yxxxx	2.0	330	+10%/-35%	0.06	39.6	9.0	3.0
PECS2R0331Mxxxx	2.0	330	$\pm 20\%$	0.06	39.6	9.0	3.0
PECS2R0331Mxxxx	2.0	330	$\pm 20\%$	0.06	39.6	6.0	3.5
PECS2R5101Mxxxx	2.0	100	$\pm 20\%$	0.06	15.0	18.0	2.5
PECS2R5221Mxxxx	2.5	220	$\pm 20\%$	0.06	33.0	15.0	2.7
PECS2R5221Mxxxx	2.5	220	$\pm 20\%$	0.06	33.0	9.0	3.0
PECS2R5331Yxxxx	2.5	330	+10%/-35%	0.06	49.5	9.0	3.0
PECS2R5331Mxxxx	2.5	330	$\pm 20\%$	0.06	49.5	9.0	3.0
PECS2R5331Mxxxx	2.5	330	$\pm 20\%$	0.06	49.5	6.0	3.5
PECS6R3101Mxxxx	6.3	100	$\pm 20\%$	0.06	25.2	15.0	2.7
PECS6R3151Mxxxx	6.3	150	$\pm 20\%$	0.06	37.8	15.0	2.7
PECS6R3151Mxxxx	6.3	150	$\pm 20\%$	0.06	37.8	12.0	3.0

Note:

1. Test condition: 20°C, 100KHz~300KHz
2. Test condition: 105°C, 100KHz

SOLDERING RECOMMENDATION



Zone	Name	Temperature	Duration
A	1 st rising temperature	The normal to preheating temperature	30s~60s
B	Preheating	140°C~160°C	60s~120s
C	2 nd rising temperature	Preheating to 200°C	20s~40s
D	Main heating	If 220/240°C	30s~60s
		If 250/260°C	20s~40s
		Peak temperature	5s~10s
E	Regular cooling	200°C~100°C	1°C/s ~4°C/s