Conductive Polymer Aluminum Solid Capacitors (SMT)

RoHS

PECH Series

MERITEK

FEATURES

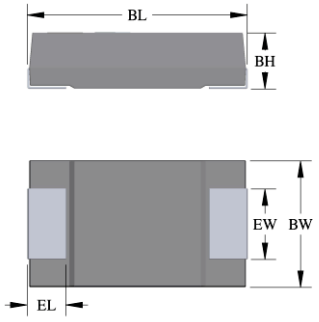
- Low ESR, surface mounting, reduced height, wide temperature range.
- Suitable for DC-DC converters, voltage regulators and decoupling applications.
- Rated voltage: 2~2.5Vdc
- Endurance: 1000 hours at 105ºC
- RoHS compliant

SPECIFICATIONS

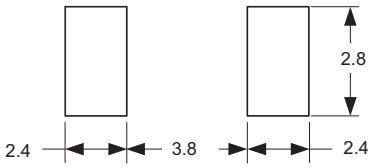
Item	Characteristic	
Category Temperature Range	-55ºC ~ +105ºC	
Rated Voltage Range	$2.0V_{DC}$ ~ $2.5V_{DC}$	
Capacitance Tolerance	M=±20%, Y=+10%~-35%	at 120Hz, 20ºC
Leakage Current	I ≤ 0.01CV ($2.0V_{DC}$ ~ $2.5V_{DC}$) at 20ºC after 2 minutes	**I : Leakage Current (μA)** **C : Rated Capacitance(μF)** **V : Rated Voltage (V)**
Surge Voltage	Rated voltage x 1.25V	at -55ºC ~ +105°C
Dissipation Factor (tan δ)	0.06 (max)	at 120Hz, 20ºC
Endurance	**Appearance:** No significant damage **Capacitance change:** ±10% of the initial value **DF(tanδ):** within initial limit **Leakage current:** within initial limit	at +105ºC 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 +60ºC 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 +60ºC 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 105ºC for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30seconds

DIMENSIONS

Dim	Value
BL	7.3±0.3
BW	4.3±0.3
EW	2.4±0.2
BH	1.9±0.3
EL	1.3±0.2
All Dimensions in mms	



PAD LAYOUT (mm)



Conductive Polymer Aluminum Solid Capacitors (SMT)

PECH Series

MERITEK

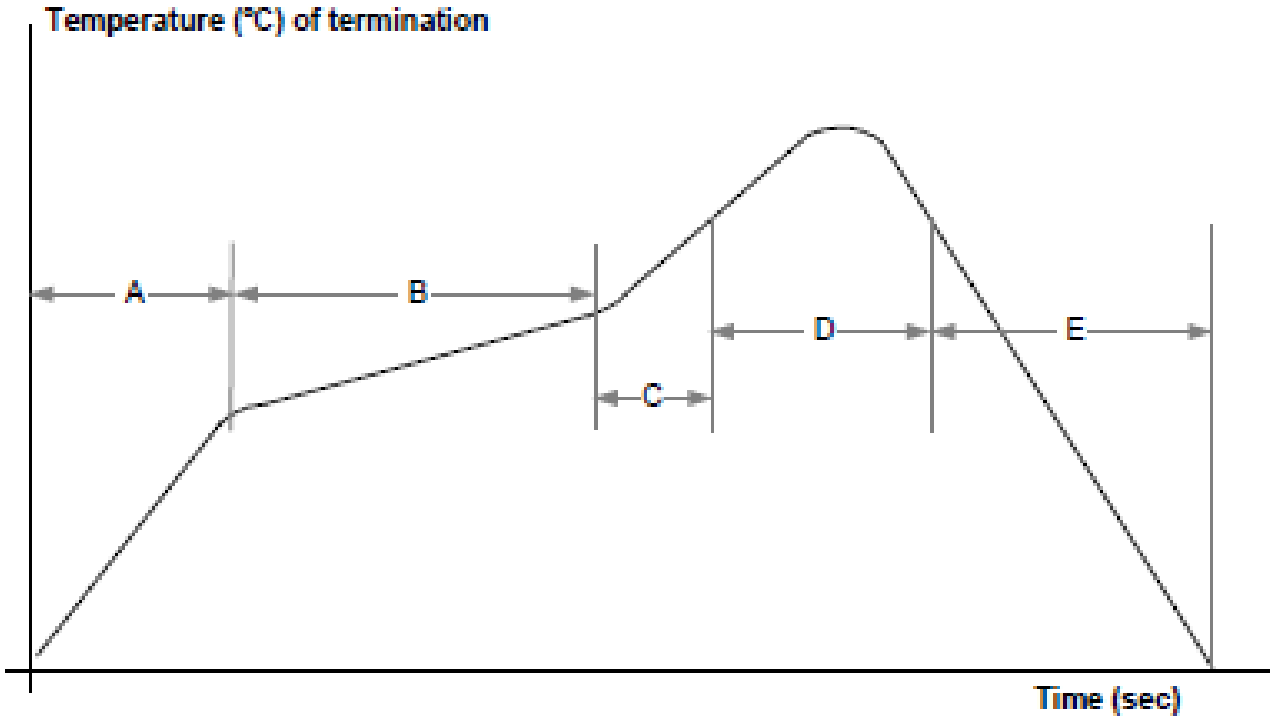
SPECIFICATIONS

Part Number	Working Voltage	Capacitance	Tolerance	tanϕ	Leakage Current	ESR[1]	Rated Ripple Current[2]
	(VDC)	(μF)			(μA)	(mΩ) MAX	(mArms)
PECH2R0471Mxxxx	2.0	470	±20%	0.06	94.0	4.5	3.8
PECH2R0471Mxxxx	2.0	470	±20%	0.06	94.0	6.0	3.5
PECH2R0471Mxxxx	2.0	470	±20%	0.06	94.0	9.0	3.0
PECH2R5471Mxxxx	2.5	470	±20%	0.06	117.5	4.5	3.8
PECH2R5471Mxxxx	2.5	470	±20%	0.06	117.5	6.0	3.5
PECH2R5471Mxxxx	2.5	470	±20%	0.06	117.5	9.0	3.0
PECH2R5471Yxxxx	2.5	470	+10%/-35%	0.06	117.5	9.0	3.0

Note:

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

SOLDERING RECOMMENDATION



Zone	Name	temperature	Duration
A	1st rising temperature	The normal to preheating temperature	30s~60s
B	Preheating	140^{0}C~160^{0}C	60s~120s
C	2nd rising temperature	Preheating to 200^{0}C	20s~40s
D	Main heating	If 217^{0}C	90s
		If 260^{0}C	10s
E	Regular cooling	200^{0}C~100^{0}C	1^{0}C/s ~4^{0}C/s