Conductive Polymer Aluminum Solid Capacitor –Radial Type

PEEA Series

MERITEK

FEATURE

- Rated voltage: 2.5 ~ 25VDC
- Endurance 2000hours at 105°C
- High ripple current capability
- Suitable for DC-DC converters, voltage regulators applications
- RoHS Compliant

PART NUMBERING SYSTEM

PEEA	6R3	331	M	0606
(1)	(2)	(3)	(4)	(5)

RoHS

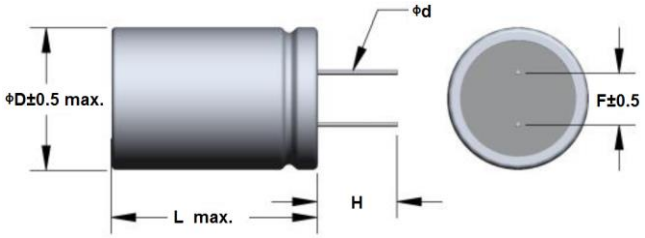
No	Item	Digit	Description	Series Reference
(1)	**Meritek Series**	PEEA	Conductive Polymer Aluminum Solid Cap	Radial Type
(2)	**Rated Voltage**	6R3	6R3: 6.3VDC	2R5: 2.5VDC, 16V: 16VDC
(3)	**Capacitance**	331	331: 330µF	221: 220µF, 561: 560µF, 101: 100µF
(4)	**Tolerance**	M	M: ±20%	-20% ~ +20%
(5)	**Size Code**	0606	Diameter X Length: 6.0X6.0 mm	0609, 0812

ELECTRICAL SPECIFICATIONS

Item	Characteristics		
Operating Temperature Range	-55°C ~ +105°C		
Rated Working Voltage	2.5VDC ~ 25VDC		
Capacitance	27µF ~ 560µF		
Capacitance Tolerance	-20% ~ +20% (M)		
Leakage Current	Shall not exceed values shown in electrical characteristics.		
Dissipation Factor (tanδ)	≤ 0.12 (Max.) at 20°C, 120Hz		
Impedance at high & Low Temperature	Impedance at 100kHz at -55±3°C or 105±2°C shall meet the values listed on the right	Z(-55°C)/Z(+20°C)	≤1.25
		Z(105°C)/Z(+20°C)	≤1.25

DIMENSION

Size (mm)	ΦD±0.5	L max.	Φd±0.5	F±0.4	H±0.3
0606	6.3	6.0	0.45	2.5	3.2
0609	6.3	9.0	0.6	2.5	3.2
0812	8.0	12.0	0.6	3.5	3.2



Conductive Polymer Aluminum Solid Capacitor –Radial Type

PEEA Series

MERITEK

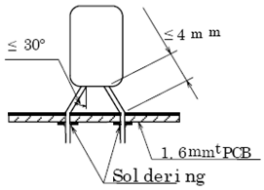
ELECTRICAL CHARACTERISTICS

WV/SV (VDC)	Part No.	Cap (μF)@120Hz	Case Size Code	Leakage Current Max. (μA)	ESR Max. (mΩ) @100kHz	Ripple Current (A r.m.s) @100kHz
2.5/2.9	PEEP2R5561M0606	560	0606	280	10	3,900
6.3/7.2	PEEP6R3221M0606	220	0606	277	15	3,160
	PEEP6R3331M0606	330	0606	416	17	3,390
16/18.4	PEEP16V101M0606	100	0606	320	24	2,490
	PEEP16V101M0609	100	0609	320	25	2,820
25/28.8	PEEP25V270M0606	27	0606	135	40	2,100
	PEEP25V330M0606	33	0606	165	60	1,700
	PEEP25V470M0606	47	0606	235	30	2,500
	PEEP25V680M0812	68	0812	340	24	3,380
	PEEP25V101M0812	100	0812	500	22	3,600

RELIBILITY

Item	Characteristics		
Endurance	Appearance	No significant damage	105°C, 2000 hours, rated voltage applied
	Capacitance Change	≤ ±20% of the initial value	
	Dissipation Factor	≤ 150% of the initial specified value	
	ESR	≤ 150% of the initial specified value	
	Leakage Current	≤ The initial specified value	
Damp Heat, Steady State	Appearance	No significant damage	60°C, 90 to 95%RH, 1000 hours No Voltage applied
	Capacitance Change	≤ ±20% of the initial value	
	Dissipation Factor	≤ 150% of the initial specified value	
	ESR	≤ 150% of the initial specified value	
	Leakage Current	≤ The initial specified value	
Surge Voltage	Appearance	No significant damage	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages at 105±2°C
	Capacitance Change	≤ ±20% of the initial value	
	Dissipation Factor	≤ 150% of the initial specified value	
	ESR	≤ 150% of the initial specified value	
	Leakage Current	≤ The initial specified value	
Pull strength	Gradually up to the specified value list below and held for 10±1 s.		No significant damage
	Case Diameter (mm)	Load Strength (N)	Load Strength (kg)
	4	2.5	0.255
	6.3	5	0.51
	8	10	1.0
	10	10	1.0
Bending strength	Bending strength load listed below will be hung at the end of the lead wire termination, and the body of a capacitor shall be bent 90° and return to its original position. For 2 to 3 seconds.		No significant damage
	Case Diameter (mm)	Load Strength (N)	Load Strength (kg)
	4	1.25	0.218
	6.3	2.5	0.255
	8	5	0.51
	10	5	0.51

RELIBILITY (CONTINUED)

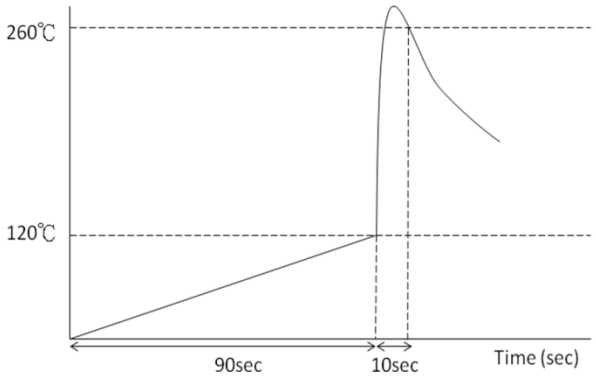
Item	Characteristics		
Vibration	Vibration cycle should vary from 10 to 55Hz with total amplitude of 1.5mm and return to 10Hz in about 1 minute. Vibration applied to a capacitor should be three directions, which each perpendicular to the other two as longitudinal axis of capacitor set as z axis, and last for 2 hours in each direction. 		No significant damage
Solderability	Time: 2±0.5s, Temperature: 235±5°C, Up to 1.5 to 2.0mm from		at least 95% should be covered
Resistance to soldering heat	Capacitance Change	≤ ±5% of the initial value	Time: 10±1s, Temperature: 260±5°C, Up to 1.5 to 2.0mm from body
	Dissipation Factor	≤ The initial specified value	
	Leakage Current	≤ The initial specified value	
Resistance to solvent	A Capacitor will be immersed for 30±5 seconds in isopropylalcohol at 20°C to 25°C and then pull it out.		No significant damage
Rapid Temperature Change	Appearance	No significant damage	Temperature cycle: -55°C: 30±5mins -55°C to 105°C: ≤3mins 105°C:30±5mins 105°C to -55°C: ≤3mins Cycles numbers: 5 cycles
	Capacitance Change	≤ ±10% of the initial value	
	Dissipation Factor	≤ The initial specified value	
	ESR	≤ The initial specified value	
	Leakage Current	≤ The initial specified value	

SOLDERING RECOMMANDTION

Solder capacitors under the soldering conditions as follows.

(a) Pre-heat condition:
Atmosphere temperature 120°C or less for up to 90 seconds

(b) Soldering condition:
Solder temperature 260°C or less for up to 10 seconds.



PACKAGING SPECIFICATION

Case size	PE bag	inner box	outer box
0606	500 PCS	12 bags (6,000 PCS)	5 inner boxes (30,000 PCS)
0609	500 PCS	8 bags (4,000 PCS)	5 inner boxes (20,000 PCS)
0812	500 PCS	4 bags (2,000 PCS)	5 inner boxes (10,000 PCS)