Surface Mount Aluminum Electrolytic Capacitors

RoHS

SET Series
(Extended Temperature)

MERITEK

FEATURES

- Load Life : 125°C 2000 hours
- For High Density Mounting

SPECIFICATIONS

Item	Characteristic					
Operation Temperature Range	-40 ~ +125°C					
Rated Working Voltage	10 ~ 50VDC					
Capacitance Tolerance (120Hz 20°C)	±20%(M)					
Leakage Current (20°C)	I ≤0.01CV or 3 (μA) *Whichever is greater after 2 minutes I: Leakage Current (μA) C: Rated Capacitance (μF) V: Working Voltage (V)					
Surge Voltage (20°C)	W.V.	10	16	25	35	50
	S.V.	13	20	32	44	63
Dissipation Factor (tan δ) (120Hz 20°C)	W.V.	10	16	25	35	50
	tan δ	0.32	0.24	0.21	0.18	0.18
Low Temperature Stability	Impedance ratio at 120Hz					
	Rated Voltage (V)	10	16	25	35	50
	-25°C / +20°C	4	3	2	2	2
	-40°C / +20°C	12	8	6	4	4
Load Life	After 2000 hours application of W.V. and +125°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage)					
	Capacitance Change	≤ ±30% of initial value				
	Dissipation Factor	≤ 300% of initial specified value				
	Leakage current	≤ initial specified value				
Shelf Life	At +125°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)					
Resistance to Soldering Heat	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.					
	Capacitance Change	≤ ±10% of initial value				
	Dissipation Factor	≤ initial specified value				
	Leakage current	≤ initial specified value				

PART NUMBERING SYSTEM

SET 50V 470 M J 102

Meritek Series

Voltage

Capacitance
Capacitance expressed in microfarads (μF).
First two digits are significant figures.
Third digit denotes number of zeros.
'R' denotes decimal point for values less than 10 μF

Tolerance
M=±20%

Case Diameter Code

Case Height (mm)
The third digit denotes the first decimal place
For example, 102 = 10.2mm

Case Diameter Code	Φ D
H	Φ 8.0
J	Φ 10.0

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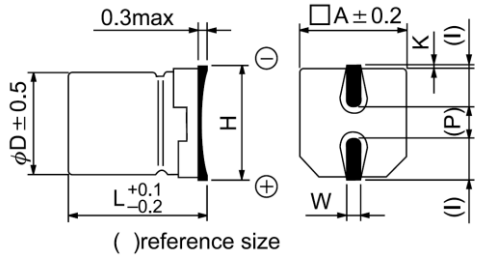
DIMENSIONS (mm)

Φ D	L	A	H	I	W	P	K
Φ 8.0	10.2	8.3	10.0MAX	3.4	0.90±0.2	3.1	0.70 ± 0.2
Φ 10.0	10.2	8.3	12.0MAX	3.5	0.90±0.2	4.6	0.70 ± 0.2



CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 125°C 120Hz

Cap. (μF)	V	10		16		25		35		50	
	Item	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
10	100									8x10.2	34
22	220									8x10.2	50
33	330									8x10.2	60
47	470							8x10.2	75	10x10.2	85
100	101			8x10.2	70	8x10.2	75	10x10.2	120		
220	221	8x10.2	90	10x10.2	120	10x10.2	120				
330	331	10x10.2	120								

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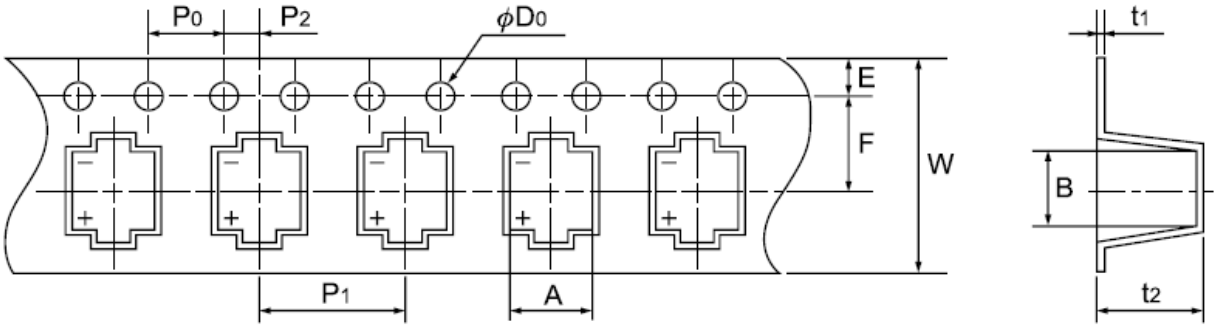
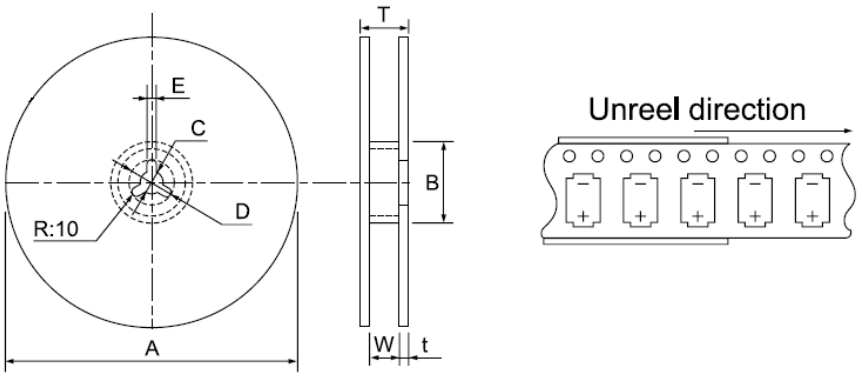
TAPING



D x L	W ±0.3	A ±0.2	B ±0.2	P_0 ±0.1	P_1 ±0.1	P_2 ±0.1	F ±0.1	$ØD_0$ ±0.1	t_1 ±0.1	E ±0.1	t_2 ±0.2
Ø4x5.4	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	5.7
Ø5x5.4	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	5.7
Ø6.3x5.4	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	5.7
Ø4x5.8	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	6.3
Ø5x5.8	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	6.4
Ø6.3x5.8	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.4
Ø6.3x7.7	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	8.2
Ø8x6.2	16.0	8.7	8.7	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.8
Ø8x10.2	24.0	8.7	8.7	4.0	16.0	2.0	11.5	1.5	0.4	1.75	11.0
Ø10x10.2	24.0	10.7	10.7	4.0	16.0	2.0	11.5	1.5	0.4	1.75	11.0

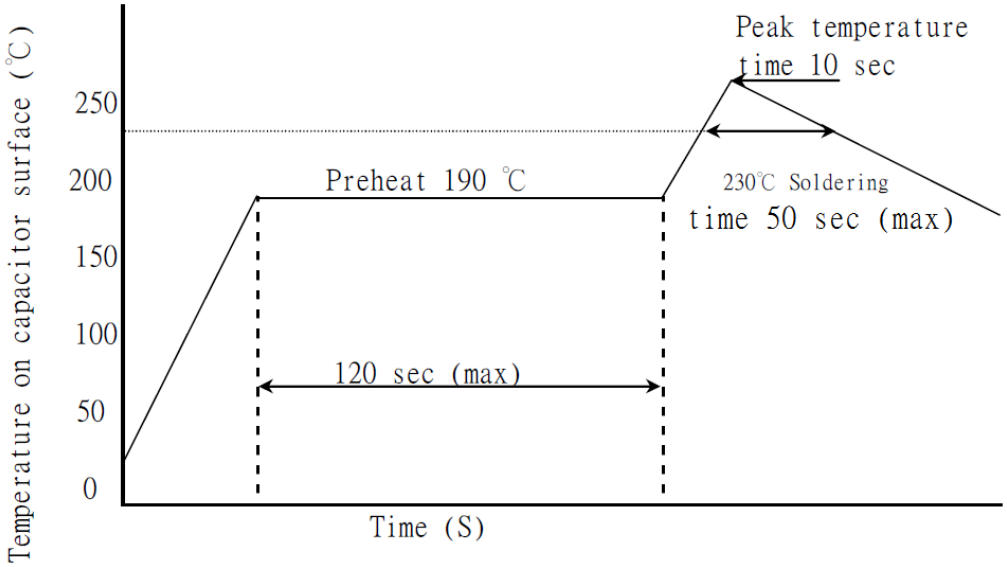
PACKAGE



D x L	A ±2.0	B MIN	C ±0.5	D ±0.8	E ±0.5	W ±1.0	T ±1.0	t ±0.5
Ø4 Ø5	380	50	13	21	2.0	14.0	20.0	3.0
Ø6.3	380	50	13	21	2.0	18.0	24.0	3.0
Ø8x6.2	380	50	13	21	2.0	18.0	24.0	3.0
Ø8x10.2	380	50	13	21	2.0	26.0	32.0	3.0
Ø10x10.2	380	50	13	21	2.0	26.0	32.0	3.0

PERMISSBLE REFLOW CONDITION

AIR REFLOW AND IR REFLOW



Preheat: Within 120sec., 190°C or less.
Soldering Time: Within 50 sec., 230°C
Peak Temperature: Less than 250°C, within 10 sec.
Possible Reflow Cycle: 2 Cycles
The final test values should be as following:

(A) Capacitance change: ≦ ±10% of initial value
(B) Dissipation factor: ≦ initial specified value
(C) Leakage current: ≦ initial specified value
(D) Visual: No damage