

Surface Mount Aluminum Electrolytic Capacitors



SRE Series
(Low Impedance, 105°C)

MERITEK

FEATURES

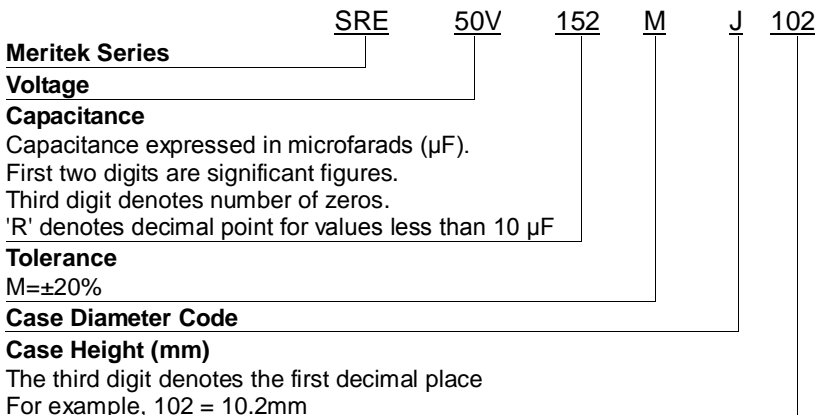
- Load Life : 105°C 1000~2000 hours
- For high density mounting
- Low impedance at 100kHz



SPECIFICATIONS

Item	Characteristic							
Operation Temperature Range	-55 ~ +105°C							
Rated Working Voltage	6.3 ~ 50VDC							
Capacitance Tolerance (120Hz 20°C)	±20%(M)							
Leakage Current (20°C)	$I \leq 0.01CV$ or $3 (\mu A)$ *Whichever is greater after 2 minutes I: Leakage Current (μA) C: Rated Capacitance (μF) V: Working Voltage (V)							
Surge Voltage (20°C)	W.V.	6.3	10	16	25	35	50	
	S.V.	8	13	20	32	44	63	
Add 0.02 per 1000uF for more than 1000 μF								
Dissipation Factor ($\tan \delta$) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50	
	$\tan \delta$	$\Phi 4 \sim \Phi 6.3$	0.24	0.20	0.16	0.14	0.12	0.12
		$\Phi 8 \sim \Phi 10$	0.28	0.24	0.20	0.16	0.14	0.14
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated Voltage (V)	6.3	10	16	25	35	50	
	-25°C / +20°C	3	2	2	2	2	2	
	-55°C / +20°C	5	4	4	3	3	3	
Load Life	After hours ($\Phi D \leq 6.3mm$ 1000 hours, $\Phi D \geq 8mm$ 2000 hours) application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage)							
	Capacitance Change	$\leq \pm 25\%$ of initial value						
	Dissipation Factor	$\leq 200\%$ of initial specified value						
	Leakage current	\leq initial specified value						
Shelf Life	At +105°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	$\leq \pm 10\%$ of initial value						
	Dissipation Factor	\leq initial specified value						
	Leakage current	\leq initial specified value						

PART NUMBERING SYSTEM



Case Diameter Code	ΦD
D	$\Phi 4.0$
E	$\Phi 5.0$
F	$\Phi 6.3$
H	$\Phi 8.0$
J	$\Phi 10.0$

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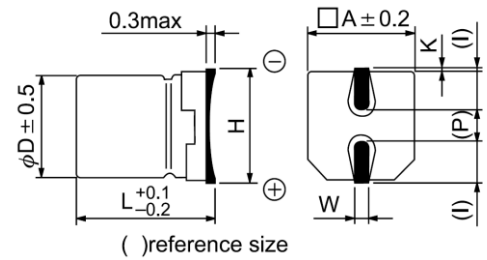


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DIMENSIONS (mm)

ΦD	L	A	H	I	W	P	K
Φ 4.0	5.8	4.3	5.5MAX	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
Φ 5.0	5.8	5.3	6.5MAX	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
Φ 6.3	5.8	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
Φ 6.3	7.7	6.6	7.8MAX	2.6	0.65±0.1	2.1	0.35 ^{+0.15} _{-0.20}
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	10.3	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 Impedance : Ω 20°C 100kHz
 Max ripple current : mA(ms) 105°C 100kHz

Cap. (μF)	V	6.3			10			16			25			35			50		
		Item	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.	R.C.	DxL	IMP.
1.0	010																4x5.8	5.00	30
2.2	2R2																4x5.8	5.00	30
3.3	3R3																4x5.8	5.00	30
4.7	4R7													4x5.8	1.80	80	5x5.8	1.52	85
6.8	6R8												5x5.8	1.20	120	5x5.8	1.20	120	
10	100							4x5.8	1.80	80	4x5.8	1.80	80	5x5.8	0.76	150	6.3x5.8	0.88	165
15	150							4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.88	165
22	220				4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.88	165
27	270	4x5.8	1.80	80	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185
33	330	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185
47	470	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.68	185
56	560	5x5.8	0.76	150	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.34	300
68	680	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.34	300
100	101	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.34	300
150	151	6.3x5.8	0.44	230	6.3x5.8	0.44	230	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.18	670
220	221	6.3x5.8	0.44	230	6.3x7.7	0.34	280	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.18	670
330	331	6.3x7.7	0.34	280	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.09	670			
470	471	8x10.2	0.17	450	8x10.2	0.17	450	8x10.2	0.17	450	10x10.2	0.09	670						
680	681	8x10.2	0.17	450	10x10.2	0.09	670	10x10.2	0.09	670									
1000	102	8x10.2	0.17	450	10x10.2	0.09	670												
1500	152	10x10.2	0.09	670															

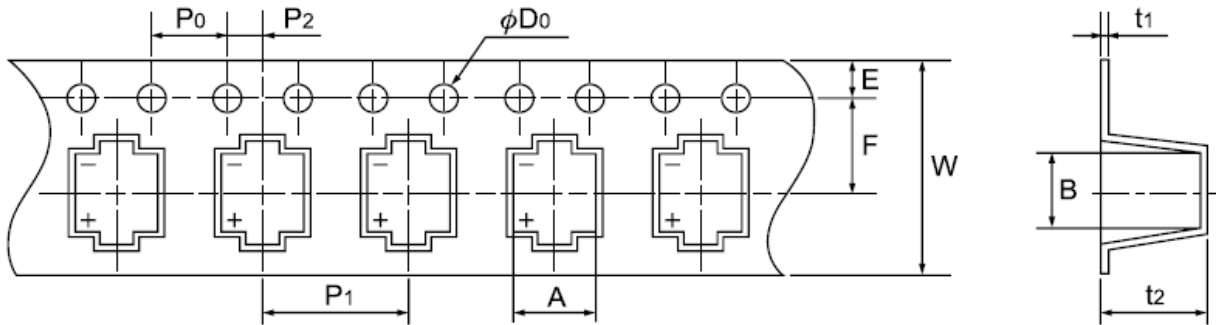
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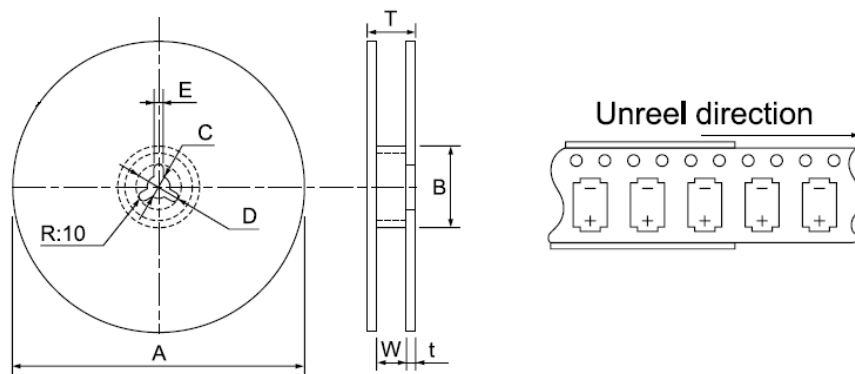
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TAPING



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	ϕD_0 ± 0.1	t_1 ± 0.1	E ± 0.1	t_2 ± 0.2
$\phi 4 \times 5.4$	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	5.7
$\phi 5 \times 5.4$	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	5.7
$\phi 6.3 \times 5.4$	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	5.7
$\phi 4 \times 5.8$	12.0	4.7	4.7	4.0	8.0	2.0	5.5	1.5	0.4	1.75	6.3
$\phi 5 \times 5.8$	12.0	5.7	5.7	4.0	12.0	2.0	5.5	1.5	0.4	1.75	6.4
$\phi 6.3 \times 5.8$	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.4
$\phi 6.3 \times 7.7$	16.0	7.0	7.0	4.0	12.0	2.0	7.5	1.5	0.4	1.75	8.2
$\phi 8 \times 6.2$	16.0	8.7	8.7	4.0	12.0	2.0	7.5	1.5	0.4	1.75	6.8
$\phi 8 \times 10.2$	24.0	8.7	8.7	4.0	16.0	2.0	11.5	1.5	0.4	1.75	11.0
$\phi 10 \times 10.2$	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
$\phi 4 \phi 5$	380	50	13	21	2.0	14.0	20.0	3.0
$\phi 6.3$	380	50	13	21	2.0	18.0	24.0	3.0
$\phi 8 \times 6.2$	380	50	13	21	2.0	18.0	24.0	3.0
$\phi 8 \times 10.2$	380	50	13	21	2.0	26.0	32.0	3.0
$\phi 10 \times 10.2$	380	50	13	21	2.0	26.0	32.0	3.0

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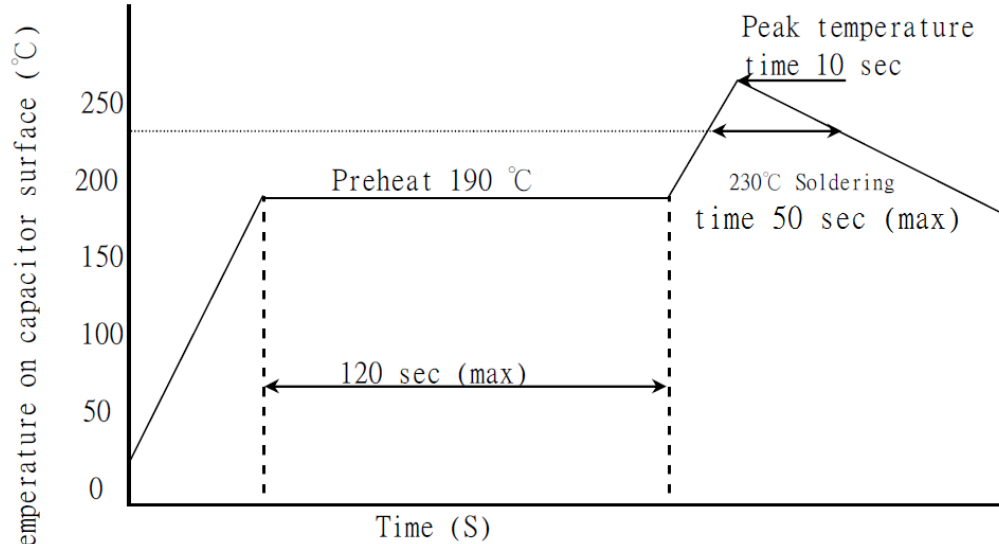


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PERMISSIBLE REFLOW CONDITION

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: $\leq \pm 10\%$ of initial value
- (B) Dissipation factor: \leq initial specified value
- (C) Leakage current: \leq initial specified value
- (D) Visual: No damage