

Surface Mount Aluminum Electrolytic Capacitors



SRED Series

MERITEK

FEATURES

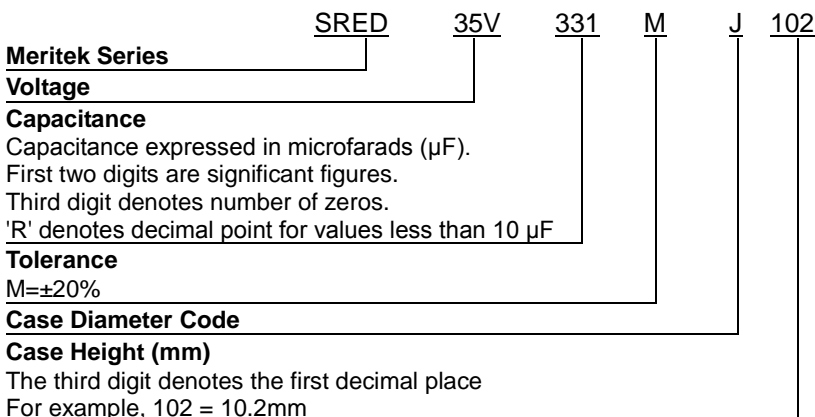
- Load Life : 105°C 2000~5000 hours
- For high density mounting
- Low impedance at 100kHz



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
Dissipation Factor ($\tan \delta$) (120Hz 20°C)	W.V.	6.3	10	16	25	35	50
	$\tan \delta$	0.28	0.24	0.20	0.16	0.13	0.12
Low Temperature Stability	Impedance ratio at 120Hz						
	Rated Voltage (V)	6.3	10	16	25	35	50
	-25°C / +20°C	3	3	2	2	2	2
	-55°C / +20°C	7	7	5	3	3	3
Load Life	After 5000 hours ($\Phi D \leq 6.3mm$ 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	$\leq \pm 30\%$ of initial value					
	Dissipation Factor	$\leq 300\%$ 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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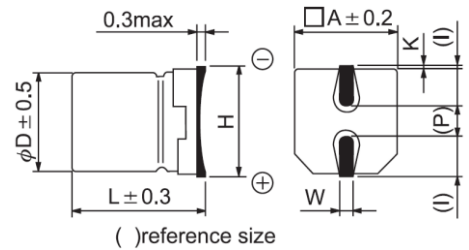


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DIMENSIONS (mm)

Φ D	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(rms) 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. R.C.	DxL	IMP. R.C.	DxL	IMP. R.C.	
4.7	4R7															5x5.8	1.52	85	
10	100												5x5.8	0.76	150	6.3x5.8	0.88	165	
22	220							5x5.8	0.76	150	5x5.8	0.76	150	5x5.8	0.76	150	6.3x5.8	0.88	165
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
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						
1000	102	8x10.2	0.17	450	10x10.2	0.09	670												
1500	152	10x10.2	0.09	670															

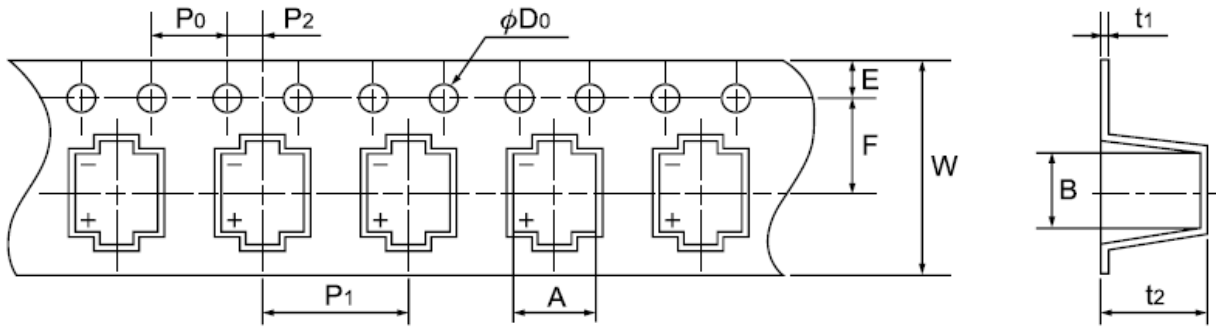
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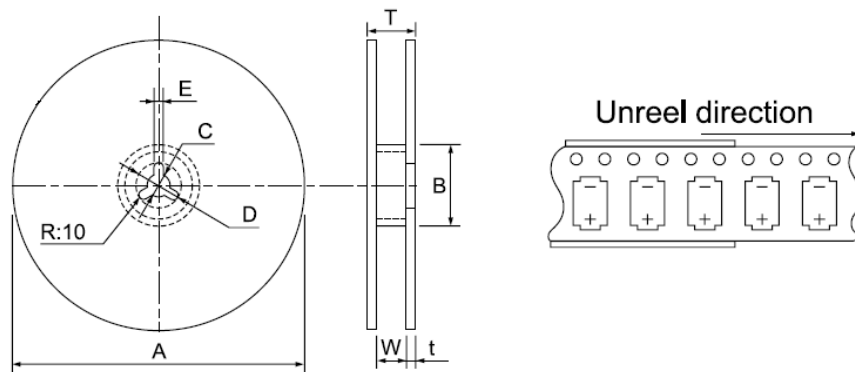
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TAPING



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

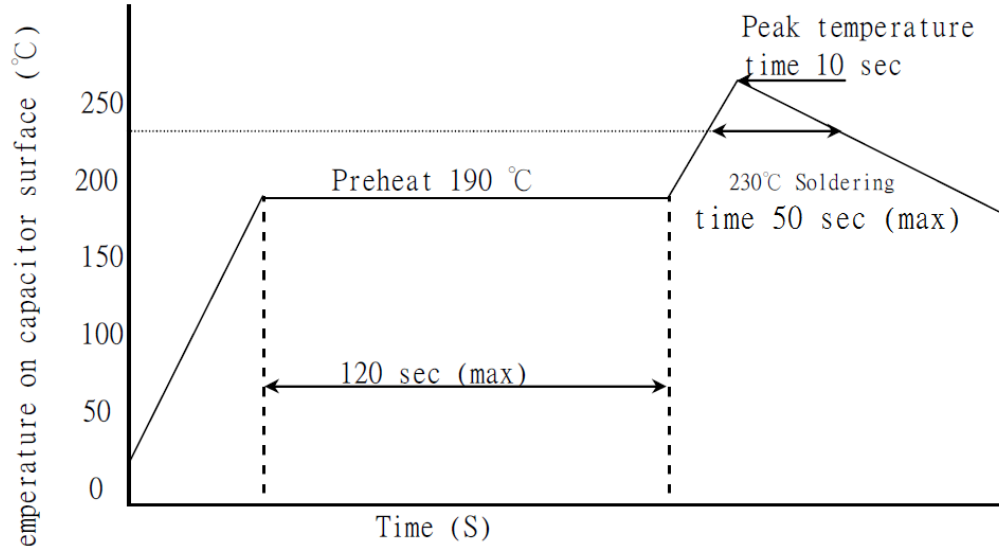


D x L	A ± 2.0	B MIN	C ± 0.5	D ± 0.8	E ± 0.5	W ± 1.0	T ± 1.0	t ± 0.5
$\phi 4 \phi 5$	380	50	13	21	2.0	14.0	20.0	3.0
$\phi 6.3$	380	50	13	21	2.0	18.0	24.0	3.0
$\phi 8 \times 6.2$	380	50	13	21	2.0	18.0	24.0	3.0
$\phi 8 \times 10.2$	380	50	13	21	2.0	26.0	32.0	3.0
$\phi 10 \times 10.2$	380	50	13	21	2.0	26.0	32.0	3.0



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