

SURFACE MOUNT VERY LOW IMPEDANCE

TYPE MXZZ

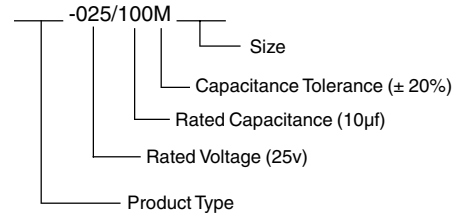


Aluminum Electrolytic Capacitors

FEATURES:

- Cylindrical leadless type for surface mounting
- Very low impedance and high current at 100KHz.
- Suitable for DC-DC converter, DC-AC inverter, etc.
- New, expanded CV range
- Anti-solvent (2 minutes)
- Designed for automatic mounting and reflow soldering

Part numbering example (25v 10µf)



SPECIFICATIONS

Item	Performance Characteristics						
Rated Voltage Range	6.3 ~ 50 Vdc						
Rated Capacitance Range	4.7 ~ 3300 µF						
Operating Temperature Range	-55 to +105°C						
Capacitance Tolerance	±20% (M), ±10% (K)						
Max. Leakage Current After 2 minutes @20°C	0.01CV or 3µA, whichever greater						
Surge Voltage & Tan Δ at 120Hz & 20°C	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8.0	13	20	32	44	63
	Tan Δ	3 ~ 8ø	0.24	0.20	0.16	0.14	0.12
10ø		0.28	0.24	0.20	0.16	0.14	0.12
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50
	Z - 40°C / Z + 20°C	3	2	2	2	2	2
	Z - 55°C / Z + 20°C	5	4	4	3	3	3
Load Life Test 105°C 1,000 hours	Capacitance Change	Within ±25% of Initial Measured Value					
	Tan Δ	Less than 200% of Specific Value					
	Leakage Current	Less than Specified Value					

STANDARD PRODUCT AND CASE SIZE

Dø x L(mm)

Cap. (µF) \ W.V. (Vdc)	6.3	10	16	25	35	50
4.7					4 x 6.3	5 x 6.3
10				4 x 6.3	5 x 6.3	5 x 6.3
15			4 x 6.3	5 x 6.3	5 x 6.3	5 x 6.3
22		4 x 6.3	5 x 6.3	5 x 6.3	5 x 6.3	6.3 x 6.3
27	4 x 6.3	—	—	—	—	—
33		5 x 6.3	—	6.3 x 6.3	6.3 x 6.3	6.3 x 8
47	5 x 6.3	—	6.3 x 6.3	6.3 x 6.3	6.3 x 6.3	6.3 x 8
56	5 x 6.3	—	—	6.3 x 6.3	—	—
68	—	6.3 x 6.3	6.3 x 6.3	—	6.3 x 8	8 x 10.5
100	6.3 x 6.3	—	6.3 x 6.3	6.3 x 8	—	8 x 10.5
120	—	6.3 x 6.3	—	—	—	—
150	6.3 x 6.3	—	6.3 x 8	8 x 10.8	10x5/ 8x10.5	10 x 10.5
220	6.3 x 6.3	6.3 x 8	6.3 x 8	10x5/ 8x10.5	8 x 10.5	10 x 10.5
330	6.3 x 8	8 x 10.5	10x5/ 8x10.5	8 x 10.5	10 x 10.5	—
470	8 x 10.5	10x5/ 8x10.5	8 x 10.5	10 x 10.5	—	—
680	10 x 8	—	10 x 10.5	—	12.5 x 14	—
820	—	10 x 10.5	—	—	—	—
1000	8 x 10.5	10 x10.5	—	12.5 x 14	—	—
1500	10 x 10.5	—	12.5 x 14	—	—	—
2200	—	12.5 x 14	—	—	—	—
3300	12.5 x 14	—	—	—	—	—



SURFACE MOUNT LOW IMPEDANCE, POLARIZED

TYPE MXZZ

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms at 100KHz & 105°C)

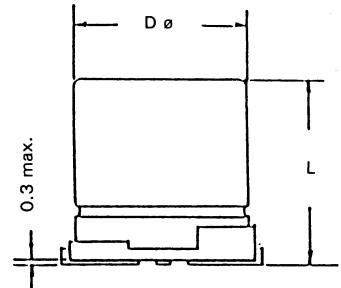
W.V. (Vdc) Cap. (µF)	6.3	10	16	25	35	50
4.7					80	
10				80	150	165
15			80	150	150	
22		80	150	150	150	165
27	80					
33		150		230	230	185
47	150		230	230	230	185
56	150			230		
68		230	230		280	300
100	230		230	280		300
120		230				
150	230		280	450	450	670
220	230	280	280	450	450	670
330	280	450	450	450	670	
470	450	450	450	670		
680	450		670			
820		670			900	
1000	450			900		
1500	870		900			
2200		900				
3300	900					

MAXIMUM IMPEDANCE (Ω at 20°C & 100KHz)

W.V. (Vdc) Cap. (µF)	6.3	10	16	25	35	50
4.7					1.80	
10				1.80	0.76	
15			1.80	0.76	0.76	
22		1.80	0.76	0.76	0.76	0.88
27	1.80					
33		0.76		0.44	0.44	0.75
47	0.76		0.44	0.44	0.44	0.75
56	0.76			0.44		
68		0.44	0.44		0.34	0.40
100	0.44		0.44	0.34		0.40
120		0.44				
150	0.44		0.34	0.17	0.17	0.22
220	0.44	0.34	0.34	0.17	0.17	0.22
330	0.34	0.17	0.17	0.17	0.09	
470		0.17	0.17	0.09		
680			0.09			
820		0.09			.066	
1000	0.17	0.09		.066		
1500	0.09		.066			
2200		.066				
3300	.066					

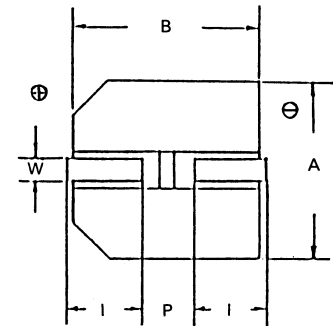
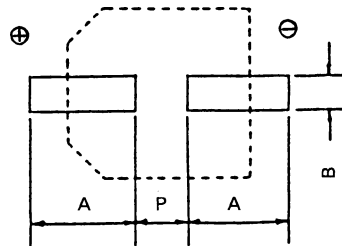
DIMENSIONS (m/m)

Case Size	Dø ± 0.5	L max	A ± 0.2	B ± 0.2	I ± 0.2	W	P ± 0.2
4 x 6.3	4.0	6.3	4.3	4.3	1.8	0.5 ~ 0.8	1.0
5 x 6.3	5.0	6.3	5.3	5.3	2.1	0.5 ~ 0.8	1.4
6.3 x 6.3	6.3	6.3	6.6	6.6	2.5	0.5 ~ 0.8	2.2
6.3 x 8	6.3	8.0	6.6	6.6	2.5	0.5 ~ 0.8	2.2
8 x 10.5	8.0	10.8	8.3	8.3	2.9	0.7 ~ 1.0	3.2
10 x 8	10.0	8.0	10.3	10.3	3.2	0.7 ~ 1.0	4.6
10 x 10.5	10.0	10.8	10.3	10.3	3.2	0.7 ~ 1.0	4.6
12.5 x 14	12.5	14	12.8	12.8	4.5	0.7 ~ 1.0	4.8



RECOMMENDED LAND PATTERN

Case Size	A	B	P
4 x 6.3	2.5	1.6	1.0
5 x 6.3	2.7	1.6	1.4
6.3 x 6.3	3.1	1.6	2.2
6.3 x 8	3.1	1.6	2.2
8 x 10.5	4.15	1.9	2.8
10 x 8	4.3	1.9	4.3
10 x 10.5	4.4	1.9	4.3
12.5 x 14	5.0	2.1	4.3



APPLICATION / PROCESSING GUIDELINES

- Polarity: All polar series capacitors have polarity. Cathode is identified by black band on top of can. MXNP series in non-polar and can be used where circuit polarity is reversible or unknown.
- Cleaning: A.) Freon TE, TES, TP-35; 2 minutes maximum at 40°C.
B.) CFC substitute solvents; 2 minutes maximum at 60°C.
Post cleaning water wash (3-5 minutes) is recommended.
- Soldering: only REFLOW soldering is applicable. The maximum recommended reflow soldering profile is shown at left. The maximum temperature-time limits are as follows:

TEMPERATURE	MAXIMUM EXPOSURE TIME
+200°C	20 seconds
+220°C	15 seconds
+230°C	5 seconds