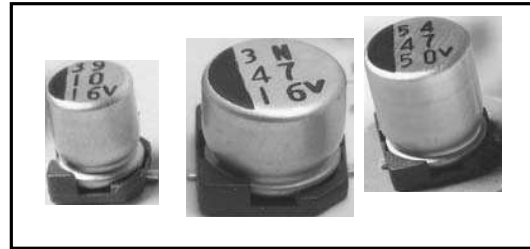


# SURFACE MOUNT ALUMINUM VERY LOW IMPEDANCE

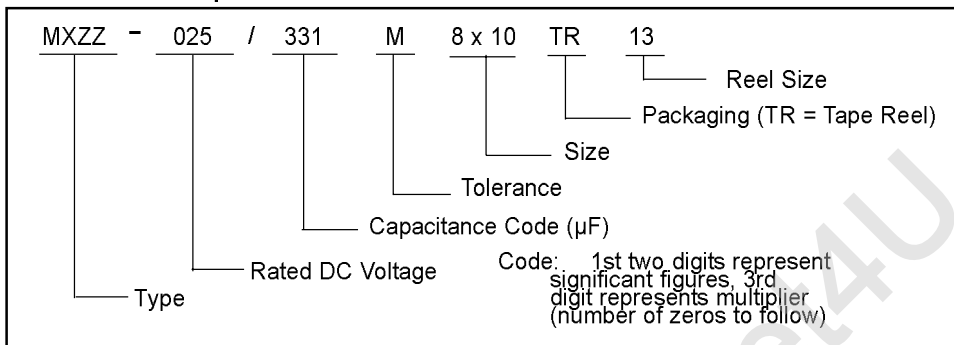
TYPE MXZZ

## 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
- Solvent resistant (2 minutes)
- Designed for automatic mounting and reflow soldering



## Part Number Example:



## SPECIFICATIONS

Item	Performance Characteristics							
Rated Voltage Range	6.3 ~ 50 Vdc							
Rated Capacitance Range	4.7 ~ 6800 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 & DF at 120Hz & 20°C	W.V. (Vdc)	6.3	10	16	25	35	50	
	S.V. (Vdc)	8.0	13	20	32	44	63	
	DF	3 ~ 8ø	0.24	0.20	0.16	0.14	0.12	0.10
Low Temperature Stability Impedance Ratio @ 120Hz		10ø	0.28	0.24	0.20	0.16	0.14	0.12
	W.V. (Vdc)	6.3	10	16	25	35	50	
	Z - 40°C / Z + 20°C	3	2	2	2	2	2	2
Load Life Test 105°C 2,000 hours exopt diam. ≤ 6.3mm 10 x 7.7mm = 1000 hours life	Z - 55°C / Z + 20°C	5	4	4	3	3	3	3
	Capacitance Change	Within ±25% of Initial Measured Value						
	D F	Less than 200% of Specific Value						
Leakage Current	Less than Specified Value							

# SURFACE MOUNT ALUMINUM VERY LOW IMPEDANCE

TYPE MXZZ

## STANDARD PRODUCT AND CASE SIZE

∅ x L(mm)

Capacitance (µF)	Working Voltage (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	6.3 x 6.3
15			4 x 6.3	5 x 6.3	5 x 6.3	6.3 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 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		10 x 10.5
220	6.3 x 6.3	6.3 x 8	6.3 x 8		8 x 10.5	10 x 10.5
330	6.3 x 8	8 x 10.5		8 x 10.5	10 x 10.5	
470	8 x 10.5		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 x 10.5		12.5 x 14		16 x 16.5
1500	10 x 10.5		12.5 x 14		16 x 16.5	
2200		12.5 x 14		16 x 16.5		
3300	12.5 x 14		16 x 16.5			
4700		16 x 16.5				
6800	16 x 16.5					

Surface Mount (SMD)

A

### MAXIMUM PERMISSIBLE RIPPLE CURRENT

(mA rms at 100KHz & 105°C)

Cap. (µF)	Working Voltage (VDC)					
	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		1300
1500	670		900		1300	
2200		900		1300		
3300	900		1300			
4700		1300				
5800	1300					

### MAXIMUM IMPEDANCE

(Ω at 20°C & 100KHz)

Cap (µF)	Working Voltage (VDC)					
	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		.050
1500	0.09		.066		.050	
2200		.066		.050		
3300	.066		.050			
4700		.050				
6800	.050					

# SURFACE MOUNT ALUMINUM VERY LOW IMPEDANCE

TYPE MXZZ

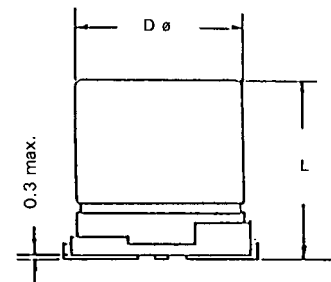
## APPLICATION / PROCESSING GUIDELINES

1. Polarity: All polar series capacitors have polarity indicators.  
Cathode is identified by black band on top of can. MXNP series is non-polar and can be used where circuit polarity is reversible or unknown.
2. 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.  
Tecate recommends the use of CFC Substitutes whenever possible.
3. Soldering: only REFLOW soldering is applicable.  
The maximum temperature-time limits are as follows:

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

## DIMENSIONS (m/m)

Case Size	D $\phi$	L max	A $\pm 0.2$	B $\pm 0.2$	I $\pm 0.2$	W	P $\pm 0.2$
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
16 x 16.5	16	17	19	19	6.5	0.9 ~ 1.5	6.7



Surface Mount (SMD)

**A**

## 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
16 x 16.5	6.6	6.5	5

