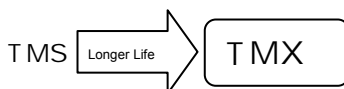


TMX Series CHIP TYPE, ULTRA LONG LIFE

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

- Operating with wide temperature range -55~+105°C
- Ultra-low ESR, High Ripple Current
- Load life of 20000 hours
- RoHS & REACH compliant, Halogen-free



SPECIFICATIONS

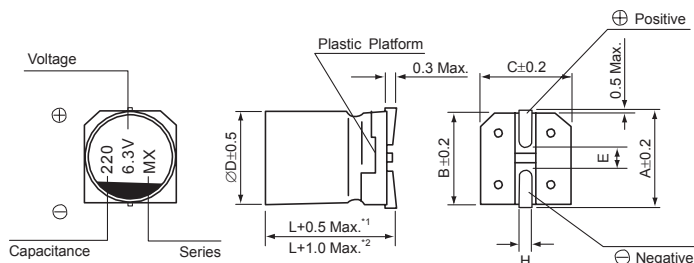
Items	Characteristics					
Operation Temperature Range	-55 ~ +105°C					
Voltage Range	4 ~ 16V					
Capacitance Range	22 ~ 560μF					
Capacitance Tolerance	±20% at 120Hz, 20°C					
Leakage Current (*1)	≤Specified value (after 2 minutes application of rated voltage at 20°C).					
Dissipation Factor (tan δ)	≤Specified value at 120Hz, 20°C.					
ESR (*2)	≤Specified value at 100KHz, 20°C.					
Stability at Low Temperature	Measurement frequency : 100KHz					
	<table border="1"> <tr> <td>Impedance Ratio ZT/Z20 (max.)</td> <td>Z(+105°C)/Z(20°C)</td> <td>≤1.25</td> </tr> <tr> <td></td> <td>Z(-55°C)/Z(20°C)</td> <td>≤1.25</td> </tr> </table>	Impedance Ratio ZT/Z20 (max.)	Z(+105°C)/Z(20°C)	≤1.25		Z(-55°C)/Z(20°C)
Impedance Ratio ZT/Z20 (max.)	Z(+105°C)/Z(20°C)	≤1.25				
	Z(-55°C)/Z(20°C)	≤1.25				
Damp Heat (Steady State)	When the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90% RH, they meet the characteristics listed below.					
	Capacitance Change	Within ±20% of initial value (*3)				
	Dissipation Factor	150% or less of initial specified value				
	ESR (*2)	150% or less of initial specified value				
Endurance	After 20000 hours application of the rated voltage at 105°C, they meet the characteristics listed below.					
	Capacitance Change	Within ±20% of initial value (*3)				
	Dissipation Factor	150% or less of initial specified value				
	ESR(*2)	150% or less of initial specified value				
Resistance to Soldering Heat <small>(Please refer page 22 for soldering conditions)</small>	After reflow soldering and restored at room temperature, they meet the characteristics listed below.					
	Capacitance Change	Within ±10% of initial value (*3)				
	Dissipation Factor	130% or less of initial specified value				
	ESR (*2)	130% or less of initial specified value				
Leakage Current	Initial specified value or less					
Marking	Red print on the case top.					

(*1) If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

(*2) Should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.

(*3) The value before test of examination of resistance to soldering.

DRAWING (Unit: mm)



*1. Applicable to Ø5~Ø8 適用於Ø5~Ø8
 *2. Applicable to Ø10 and above 適用於Ø10 和Ø10 以上

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

T MX Series

DIMENSIONS (Unit: mm)

∅D × L	5 × 6	6.3 × 6	8 × 7
A	6.0	7.3	9.0
B	5.3	6.6	8.3
C	5.3	6.6	8.3
E	1.6	2.1	3.2
L	6.0	6.0	7.0
H	0.5~0.8	0.5~0.8	0.8~1.1

DIMENSIONS & STANDARD RATINGS

WV (V) Cap. (μF) / Parameter		4					6.3				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
47	476						5 × 6	0.12	59.22	35	1600
100	107						5 × 6 (6.3 × 6)	0.12 (0.12)	126 (126)	25 (22)	2400 (2800)
120	127										
150	157	5 × 6	0.12	120	25	2200	6.3 × 6	0.12	189	22	2800
220	227						6.3 × 6 (8 × 7)	0.12 (0.12)	277 (277)	20 (22)	2800 (3200)
330	337	6.3 × 6 (8 × 7)	0.12 (0.12)	264 (264)	20 (22)	2800 (3200)					
390	397						8 × 7	0.12	491	22	3200
560	567	8 × 7	0.12	448	18	3600					

WV (V) Cap. (μF) / Parameter		10					16				
		Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ∅D×L (mm)	Dissipation factor (tan δ)	Leakage current (μA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
22	226						5 × 6	0.12	70.4	45	1100
33	336	5 × 6	0.12	66	40	1300					
39	396						5 × 6 (6.3 × 6)	0.12 (0.12)	125 (125)	35 (30)	2000 (2200)
56	566	6.3 × 6	0.12	112	27	2300					
68	686	5 × 6	0.12	136	30	2100	6.3 × 6	0.12	218	30	2200
82	826						8 × 7	0.12	262	28	2800
120	127	6.3 × 6	0.12	240	27	2300	8 × 7	0.12	384	28	2800
150	157	8 × 7	0.12	300	30	2600					
270	277	8 × 7	0.12	540	22	3200					