Topdiode Manufacturing Company
Diode | Capacitors
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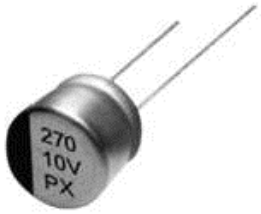
TPX Series RADIAL LEAD TYPE, ULTRA LONG LIFE

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

TPS → Longer Life → TPX



SPECIFICATIONS

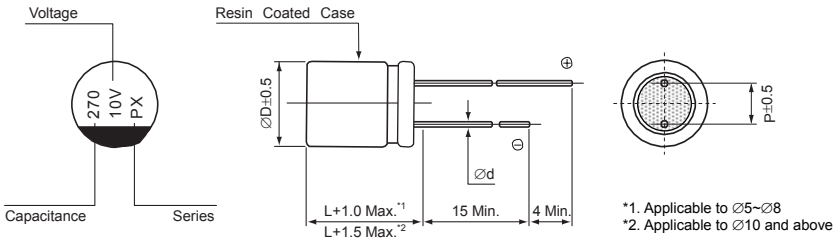
Items	Characteristics
Operation Temperature Range	-55 ~ +105°C
Voltage Range	4 ~ 16V
Capacitance Range	100 ~ 1200μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current (*1)	≤Specified value (after 2 minutes application of rated voltage at 20°C).
Dissipation Factor (tan δ)	≤Specified value at 120Hz, 20°C.
ESR (*2)	≤Specified value at 100KHz, 20°C.
Stability at Low Temperature	Measurement frequency : 100KHz 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 Leakage Current: Initial specified value or less
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 Leakage Current: Initial specified value or less
Resistance to Soldering Heat	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 to the capacitor body.

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

DRAWING (Unit: mm)



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TPX Series

DIMENSIONS (Unit: mm)

ØD x L	6.3 x 9	6.3 x 10.5	8 x 7	8 x 9	8 x 12	10 x 13
P	2.5	2.5	3.5	3.5	3.5	5.0
Ød	0.6	0.6	0.6	0.6	0.6	0.6
L	9.0	10.5	7.0	9.0	12.0	13.0

DIMENSIONS & STANDARD RATINGS

WV (V) / Parameter / Cap. (µF)		4					6.3				
		Case size ØD×L (mm)	Dissipation factor (tan δ)	Leakage current (µA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ØD×L (mm)	Dissipation factor (tan δ)	Leakage current (µA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
270	277	6.3 × 9	0.08	216	8	4800					
330	337						6.3 × 10.5	0.08	416	20	3000
390	397						8 × 7	0.08	491	15	3900
470	477						8 × 12	0.08	592	7	5500
560	567	8 × 7 (8 × 9)	0.08 (0.08)	448 (448)	15 (7)	3900 (5200)	6 × 9 (8 × 9)	0.08 (0.08)	706 (706)	9 (8)	4300 (5000)
680	687	8 × 12	0.08	544	7	5500					
820	827						10 × 13	0.08	1033	8	5500
1200	128	10 × 13	0.08	960	8	5800					

WV (V) / Parameter / Cap. (µF)		10					16				
		Case size ØD×L (mm)	Dissipation factor (tan δ)	Leakage current (µA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz	Case size ØD×L (mm)	Dissipation factor (tan δ)	Leakage current (µA)	ESR (mΩ) max. 20°C, 100KHz	Ripple current (mA rms) 105°C, 100KHz
100	107						6.3 × 10.5	0.08	320	24	2800
150	157	6.3 × 10.5	0.08	300	20	3000					
270	277	8 × 12	0.08	540	8	4900	8 ×12	0.08	864	9	4500
330	337						10 × 13	0.08	1056	9	4700
470	477	10 × 13	0.08	940	8	5500	10 × 13	0.08	1504	9	4700

How to order

TPX	A	106	M	0035	B	0025
↓	↓	↓	↓	↓	↓	↓
Type	Material Code	Capacitance code	Tolerance	Rated DC Voltage	Package	Pitch size
TPX	A: Polymer electrolytic cap	pF Code: 1st two digits represent significant figures 3rd digit represents mulitplier (number of zeros to follow) 106 = 10uF 107 = 100uF	M: +/-20%	Code 0004 : 4VDC 0006 = 6.3VDC 0010 = 10VDC 0016 = 16VDC	B: Bulk	0020: pitch size 2.0mm 0025: pitch size 2.5mm 0035: pitch size 3.5mm 0050: pitch size 5.0mm