

TEAPO ELECTRONIC CORPORATION

Products Specification

Subject : Type Y1- PI Metallized Polypropylene Film
Capacitors for AC Application

Rev : 0

Date : 06/20/2012

SPECIFICATION :

- Temperature Range : Minimum Limit temperature : -25°C.
Maximum Limit temperature : +75°C.
- Rated Voltage : 250 , 400, 450V.AC/60Hz
- Capacitance Range : 0.1uF to 2.2uF.
- Capacitance Tolerance : J ($\pm 5\%$) ; K ($\pm 10\%$) ; M ($\pm 20\%$)
- Withstand Voltage : (a). Between terminals: 1.5 x rated voltage for 10 sec.
(b). Between terminals and case : 2 x rated voltage for 1 ~ 5 sec.
This test occasional srif-healing breakdown are allowed.
- Dissipation Factor : $\leq 0.1\%$ at 200V.AC , 60Hz and 20°C.
($\tan \delta\%$) or $\leq 0.1\%$ at 1KHz and 20°C.
- Insulation Resistance : (a). Between terminals :
 $\geq 10 \times 1000 \text{ M}\Omega$. for $C \leq 1.0\mu\text{F}$.
 $\geq 10 \times 1000 \text{ M}\Omega.\mu\text{F}$ for $C > 1.0\mu\text{F}$.
(b). Between terminals and case : $\geq 10 \times 1000 \text{ M}\Omega$.
Meassured at 100V.DC 60sec. and 20°C
- Dry Heat Resistance : In accordance with IEC 68-2-2 test Ba.
Conditions
Test temperature : Maximum Limit temperature.
Test duration : 16hrs.
Test criteria
(a). Appearance : No visible damage and no leakage.
(b). Capacitance change : $\leq +0\%$; -5% of the initial value.
(c). Insulation resistance : $\geq 10\%$ of initial specified value.

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- Cold Resistance : In accordance with IEC 68-2-1 test Aa.
Conditions
Test temperature : Minimum Limit temperature.
Test duration : 2hrs.
Test criteria
(a). Appearance : No visible damage.
(b). Capacitance change : $\leq +3\%$; -0% of the initial value.

- Humidity Resistance : In accordance with IEC 68-2-3 test Ca.
Conditions
Test temperature : + 40 °C.
Relative humidity : 90 to 95 %.
Test duration : 21 day.
Test voltage : (a). Without voltage
(b). With rated voltage.
Test criteria
(a). Capacitance change : $\leq \pm 4\%$ of the initial value.
(b). Dissipation factor : $\leq 0.05\%$ of increased value.
(c). Insulation resistance : $\geq 50\%$ of initial specified value.

- Endurance : Place the capacitor in the thermostaic oven in accordance with the condition of following :
Test temperature : Maximum limit temperature.
Test voltage : 1.2 x rated voltage.
Test duration : 1000 \pm 12 hrs.
Test criteria
(a). Appearance : No visible damage and no leakage.
(b). Capacitance change : $\leq \pm 4\%$ of the initial value.
(c). Dissipation factor : $\leq 0.05\%$ of increased value.
(d). Insulation resistance : $\geq 50\%$ of initial specified value.

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- Solderability :
 - In accordance with IEC 68-2-20 test Ta.
 - Method 1 (only for wire terminals).
 - Conditions
 - Solder bath temperature : 260 ± 5 °C.
 - Solder time : 2 ± 0.5 sec.
 - Capacitor body may lie on printed circuit board.
 - Method 2 (only for tag terminals).
 - Conditions
 - Solder bath temperature : 350 ± 5 °C.
 - Solder time : 10 ± 2 sec.
 - Test criteria
 - No damage and good tinning.

- Soldering Heat Resistance :
 - In accordance with IEC 68-2-20 test Tb.
 - Method 1A (only for wire terminals).
 - Conditions
 - Solder bath temperature : 260 ± 5 °C.
 - Solder time : 5 ± 1 sec.
 - Capacitor body may lie on printed circuit board.
 - Method 2A (only for tag terminals).
 - Conditions
 - Solder bath temperature : 350 ± 10 °C.
 - Solder time : 10 ± 2 sec.
 - Test criteria
 - (a). Appearance : No damage.
 - (b). Capacitance change : $\leq \pm 3\%$ of the initial value.

- Vibration Resistance :
 - In accordance with IEC 68-2-6 test Fc.
 - Conditions
 - Frequency range : 10 to 55Hz.
 - Conforming to max. : 10g.
 - Test duration : 6hrs.
 - Test criteria
 - (a). Appearance : No damage.
 - (b). Capacitance change : $\leq \pm 2\%$ of the initial value.

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- Tensile Strength Terminals : In accordance with IEC 68-2-6 test Ua.

Conditions

Load force and holding times :

Sectional area (mm x mm) or (Dia mm)	Load force Kg(N)	Holding times (sec)
≥ 0.07 to ≤ 0.2 (≥ 0.3 to ≤ 0.5)	0.5(5)	10
> 0.2 to ≤ 0.5 (> 0.5 to ≤ 0.8)	1.0(10)	10
> 0.5 to ≤ 1.0 (> 0.8 to ≤ 1.2)	2.5(25)	20
> 1.0 (> 1.2)	4.5(45)	20

Test criteria

No wire (tang) breakage and no damage of capacitor.

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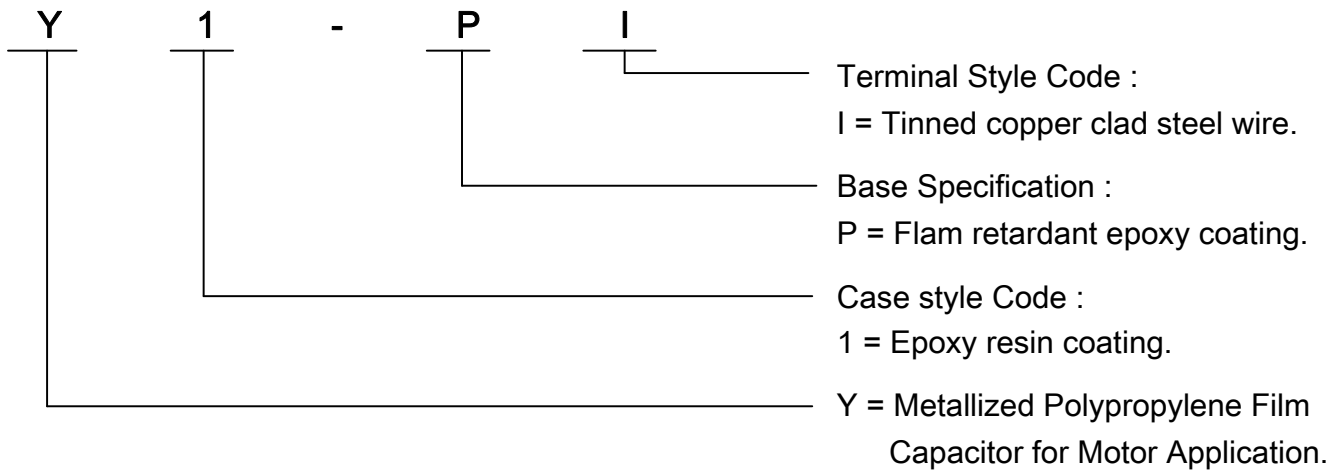
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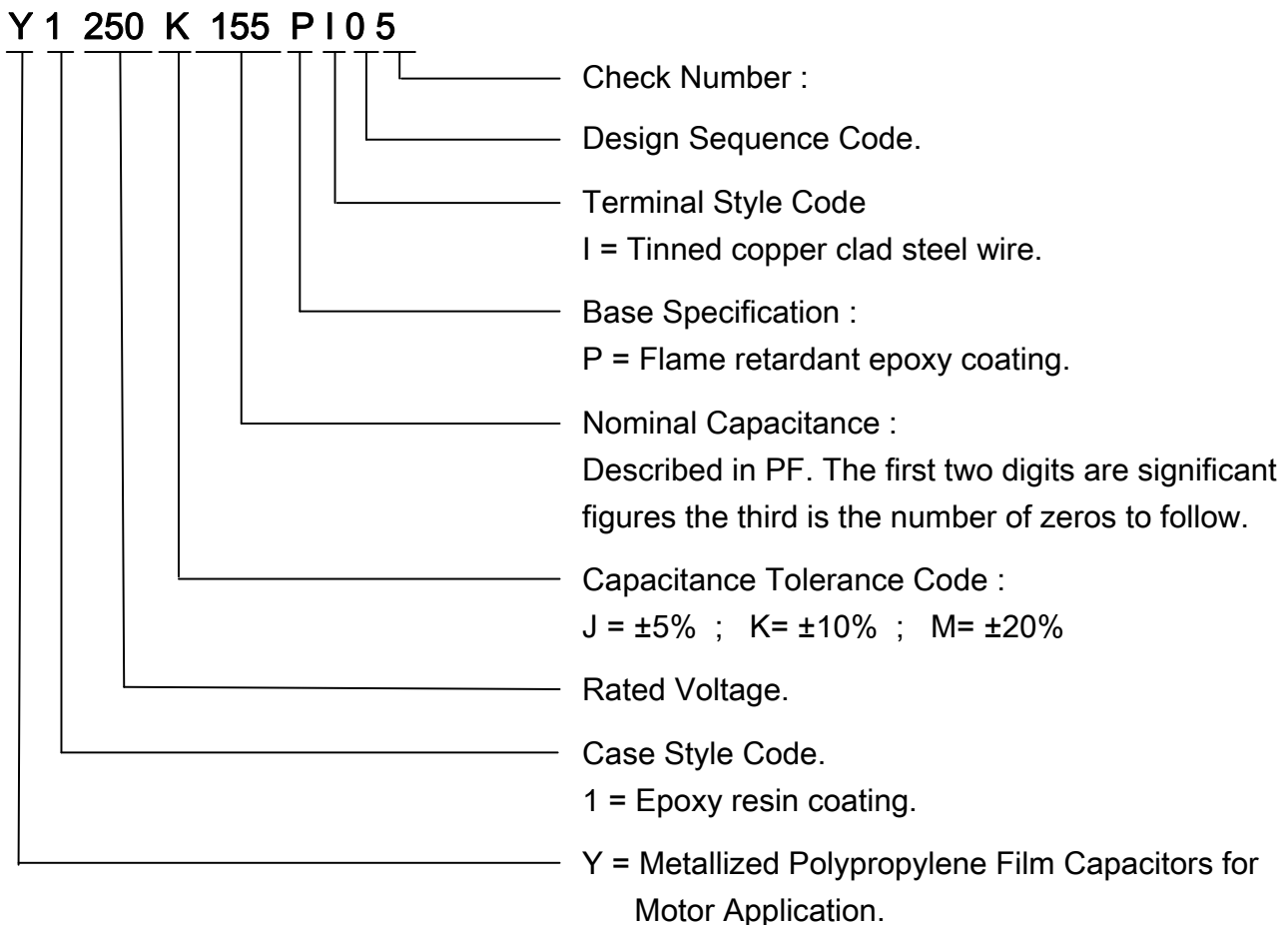
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• Type System



• Catalog Number System



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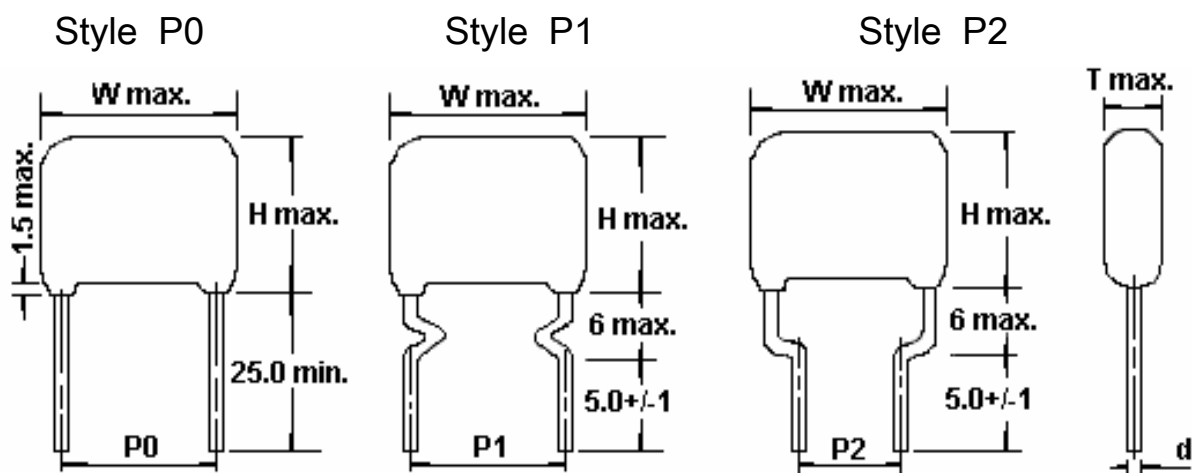
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Outline Drawing (unit : m / m)

Pitch Dimensions (mm)

W	13.0	19.0	26.0	32.0
P0	10.0	15.0	22.5	27.5
P1	10.0	15.0	22.5	27.5
P2	5.0	10.0	17.5	22.5


 ± 1.5 (P0 ≥ 20)

 ± 1.0 (P0 < 20)

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Table 1. Type Y1-PI Standard Ratings and Catalog Number

Catalog Number	Capacitance (μ F)	Rated Voltage (V.AC)	Dimensions in mm W x H x T x d
Y1250 x 104PI x x	0.1	250	13.0 x 11.5 x 6.5 x 0.6
Y1250 x 124PI x x	0.12		19.0 x 10.5 x 5.5 x 0.6
Y1250 x 154PI x x	0.15		19.0 x 11.0 x 6.0 x 0.6
Y1250 x 184PI x x	0.18		19.0 x 11.5 x 6.5 x 0.6
Y1250 x 224PI x x	0.22		19.0 x 12.0 x 6.5 x 0.6
Y1250 x 274PI x x	0.27		19.0 x 13.0 x 7.5 x 0.6
Y1250 x 334PI x x	0.33		19.0 x 13.5 x 8.0 x 0.6
Y1250 x 394PI x x	0.39		19.0 x 15.0 x 8.5 x 0.6
Y1250 x 474PI x x	0.47		19.0 x 15.5 x 8.5 x 0.6
Y1250 x 564PI x x	0.56		26.0 x 15.5 x 7.5 x 0.8
Y1250 x 684PI x x	0.68		26.0 x 16.0 x 8.0 x 0.8
Y1250 x 824PI x x	0.82		26.0 x 16.0 x 9.0 x 0.8
Y1250 x 105PI x x	1.0		26.0 x 17.0 x 9.5 x 0.8
Y1250 x 125PI x x	1.2		32.0 x 17.0 x 10.0 x 0.8
Y1250 x 155PI x x	1.5		32.0 x 18.0 x 10.5 x 0.8
Y1250 x 185PI x x	1.8		32.0 x 21.0 x 11.5 x 0.8
Y1250 x 205PI x x	2.0		32.0 x 21.5 x 11.5 x 0.8
Y1250 x 225PI x x	2.2		32.0 x 22.5 x 12.5 x 0.8

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Catalog Number	Capacitance (μ F)	Rated Voltage (V.AC)	Dimensions in mm W x H x T x d
Y1400 x 223PI x x	0.022	400	13.0 x 11.5 x 6.5 x 0.6
Y1400 x 233PI x x	0.033		13.0 x 12.0 x 7.5 x 0.6
Y1400 x 104PI x x	0.10		19.0 x 13.5 x 7.5 x 0.6
Y1400 x 124PI x x	0.12		19.0 x 13.5 x 8.0 x 0.6
Y1400 x 154PI x x	0.15		19.0 x 14.5 x 8.5 x 0.6
Y1400 x 184PI x x	0.18		26.0 x 14.5 x 7.0 x 0.8
Y1400 x 224PI x x	0.22		26.0 x 15.0 x 7.5 x 0.8
Y1400 x 274PI x x	0.27		26.0 x 16.0 x 8.5 x 0.8
Y1400 x 334PI x x	0.33		26.0 x 16.5 x 9.5 x 0.8
Y1400 x 394PI x x	0.39		26.0 x 17.5 x 10.0 x 0.8
Y1400 x 474PI x x	0.47		26.0 x 18.0 x 10.5 x 0.8
Y1400 x 564PI x x	0.56		32.0 x 18.5 x 11.0 x 0.8
Y1400 x 684PI x x	0.68		32.0 x 19.5 x 12.0 x 0.8
Y1400 x 824PI x x	0.82		32.0 x 22.0 x 12.0 x 0.8
Y1400 x 105PI x x	1.0		32.0 x 23.5 x 14.0 x 0.8
Y1400 x 155PI x x	1.5		32.0 x 27.0 x 17.0 x 0.8

Catalog Number	Capacitance (μ F)	Rated Voltage (V.AC)	Dimensions in mm W x H x T x d
Y1450 x 104PI x x	0.10	450	19.0 x 14.0 x 8.0 x 0.6
Y1450 x 154PI x x	0.15		19.0 x 15.5 x 9.5 x 0.6
Y1450 x 224PI x x	0.22		26.0 x 16.0 x 8.5 x 0.8
Y1450 x 334PI x x	0.33		26.0 x 17.5 x 10.0 x 0.8
Y1450 x 474PI x x	0.47		26.0 x 21.0 x 12.0 x 0.8
Y1450 x 468PI x x	0.68		26.0 x 23.0 x 15.0 x 0.8
Y1450 x 105PI x x	1.0		32.0 x 23.0 x 16.0 x 0.8

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