X1Y1 SAFETY CAPACITORS

Safety Standard Certified Ceramic Capacitors

Feature

■Wide capacitance range from 10pF to 4700pF

■Operating Temperature: -40℃～125℃

■Storage Temperature: 15℃~35℃

■Fix capacitors Y1 for electromagetic interference suppression and connection to the supply mains has high dielectric coefficient ceramic dielectric and flame retardant epoxy resin package

Applications

■ Can be used for power supply noise suppression circuit in cross connection and bypass.It is a primary and secondary coupling X/Y capacitor used as AC line filter and switching power supply and AC converter

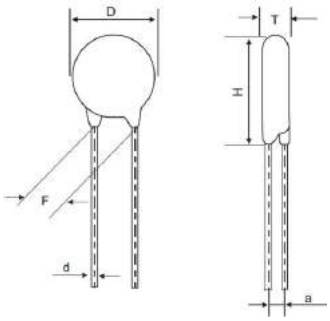
Part Number Code

Y1	U	222	M	A250	8100	A	000
Type	**Material Code**	**Capacitance Code**	**Tolerance**	**Rated Voltage**	**Shap & Size Code**	**Package Code**	**Suffix Indicate Special Requirement**
Y1 Y2	**Dielectrics Code** U: Y5U Z: Y5V P: Y5P S : SL	**pF Code: 1st two digits** represent significant figures 3rd digit represents multiplier (number of zeros to follow) 100= 10pF 470= 47pF 222= 2200pF	**M: +/-20%** K: +/-10% M: +/-20%	**For AC Voltage** A400: 400VAC A250: 250VAC	**8100: Lead style 8 and 10mm ptich** **First code represent lead style code.** **The following 3 digits represent pitch size** 100: pitch size 10mm 050: pitch size 5mm	**A: Ammo Taped** **B: Bulk** **R: Tape & Reel**	**000: Indicating Standard** **If for cut leads or long leads:** 000: mean standard LL 035: cut leads to 3.5mm 040: cut leads to 4mm 250: 25mm long leads

Specifications

Capacitance and Dissipation factor testing condition	SL:25℃、1MHz、1Vrms Y5P/Y5U/Y5V:25℃、1KHz、1Vrms
Dissipation Factor(tanδ)	≤2.5%
Rated Voltage	Class X1, 400 VAC, Class Y1, 400 VAC
Withstand Voltage	4000VAC
Insulation Resistance (I.R.)	IR≥10000MΩ
Temperature Characteristic	SL、Y5P、Y5U、Y5V

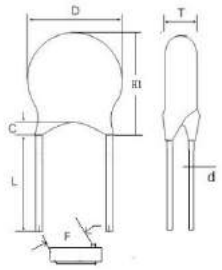
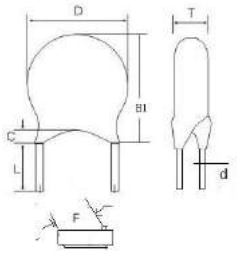
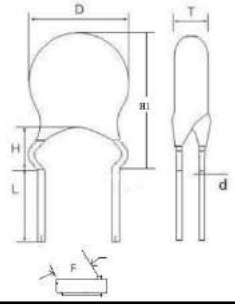
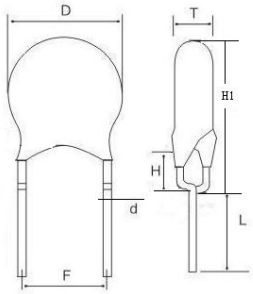
Dimensions (mm) and Approval



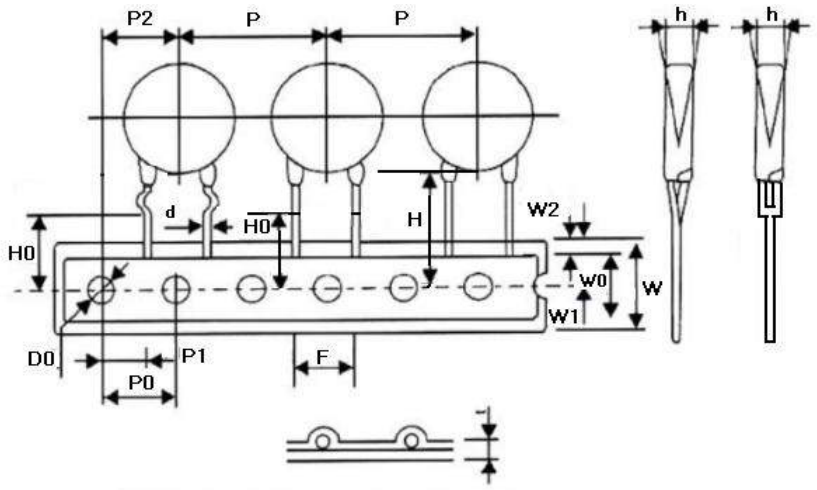
Part No.	Size (mm)				Approval				
	D Max.	T Max.	F±0.8	d±0.05	CQC	VDE	cUL (Canada)	KTL	ENEC
Y1-SL-100K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-200K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-220K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-330K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-470K	8.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-560K	8.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-680K	9.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-820K	9.5	4.0	10.0	0.6	√	√	√		√
Y1-Y5P-101K	7.0	4.0	10.0	0.6	√	√	√	√	√
Y1-Y5P-151K	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5P-221K	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5P-331K	8.5	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5P-471K	9.0	5.0	10.0	0.65	√	√	√	√	√
Y1-Y5P-561K	10.0	5.0	10.0	0.65	√	√	√	√	√
Y1-Y5P-681K	10.0	5.0	10.0	0.65	√	√	√	√	√

Part No.	Size (mm)				Approval				
	D Max.	T Max.	F±0.8	d±0.05	CQC	VDE	cUL (Canada)	KTL	ENEC
Y1-Y5P-102K	12.0	5.5	10.0	0.65	√	√	√	√	√
Y1-Y5U-331K	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5U-471K	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5U-561K	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5U-102M	8.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5U-152M	10.0	5.0	10.0	0.65	√	√	√	√	√
Y1-Y5U-222M	11.0	5.0	10.0	0.65	√	√	√	√	√
Y1-Y5U-332M	14.5	5.5	10.0	0.65	√	√	√	√	√
Y1-Y5U-472M	17.5	5.5	10.0	0.65	√	√	√	√	√
Y1-Y5V-102M	7.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5V-152M	8.0	5.0	10.0	0.6	√	√	√	√	√
Y1-Y5V-222M	9.0	5.0	10.0	0.65	√	√	√	√	√
Y1-Y5V-332M	11.0	5.5	10.0	0.65	√	√	√	√	√
Y1-Y5V-472M	12.0	5.5	10.0	0.65	√	√	√	√	√

Lead Configuration

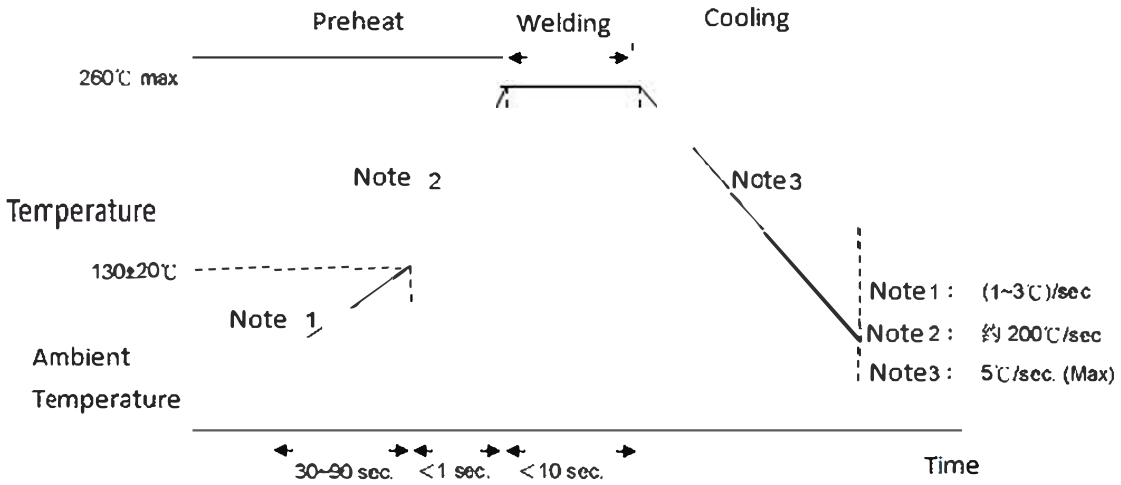
Lead Style	Drawing	Lead Length L (mm)	Coating Lead Length C (mm)	Height H (mm)
Long Straight		16.0 min	①C≤2.5mm (Product diameter < 12mm） ②C≤3.0mm (Product diameter≥12mm)	/
Short Straight		①[2.5≤L＜6.0]+/-0.5; ②[6.0≤L≤10]+/-1.0	①C≤2.5mm (Product diameter < 12mm） ②C≤3.0mm (Product diameter≥12mm)	/
Outside Crimped		①[2.5≤L＜6.0]+/-0.5; ②[6.0≤L≤10]+/-1.0	Not exceed the bend point	5.0mm Max
Vertical Crimped		①[2.5≤L＜6.0]+/-0.5; ②[6.0≤L≤10]+/-1.0	Not exceed the bend point	4.0mm Max

Taping And Dimensions (mm)

Figure	Symbol	P=10.0	
	Po	12.7±0.3	
	P	25.4±1.0	
	P1	7.7±0.7	
	P2	12.7±1.3	
	F	10.0±0.8	
	Δh	0±2.0	
	W	18.0 +1.5/-1.0	
	Wo	10.5 Max	
	W1	9.0+0.75/-0.5	
	W2	3.0 Max	
	Do	4.0±0.2	
	H	20+1.5/-1.0	
	Ho	16.5&17.0&19.0 +1.5/-1.0	
	L	Straight Lead	Crimped Lead
		11.0 Max	9.0 Max
	t1	0.5±0.2	
	t2	1.7 Max	

Soldering Condition

Wave Soldering Graph

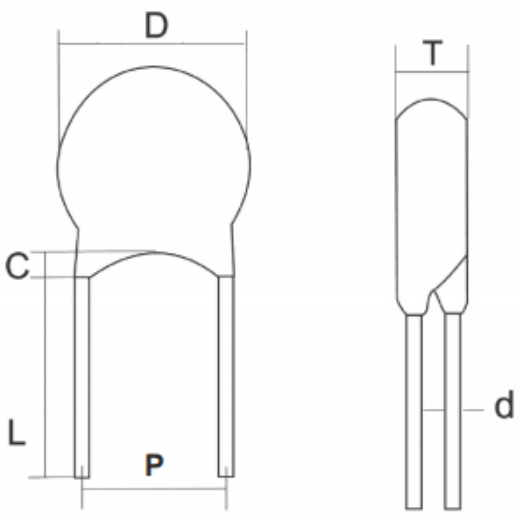


Note: Film capacitor is not suitable for reflow soldering welding, because it will cause thermal contraction and affect electrical performance

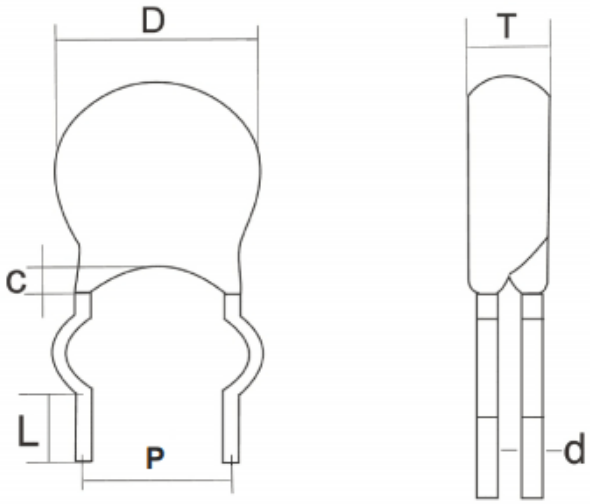
Iron Soldering Condition

Item	Condition
Temperature ofsoldering copper bit	360°C (max)
Soldering duration	3sec (max.)
Space between soldering position and coating layer	2mm (min.)

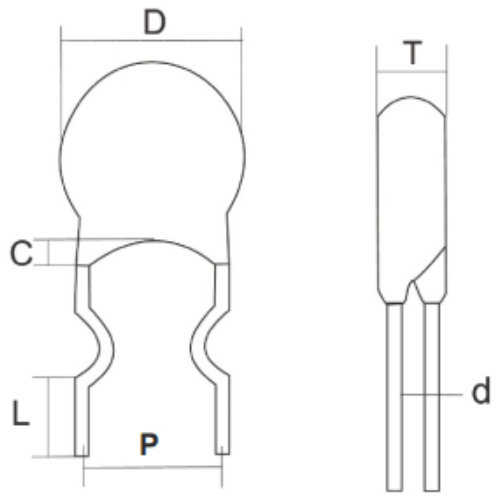
Lead Styles:



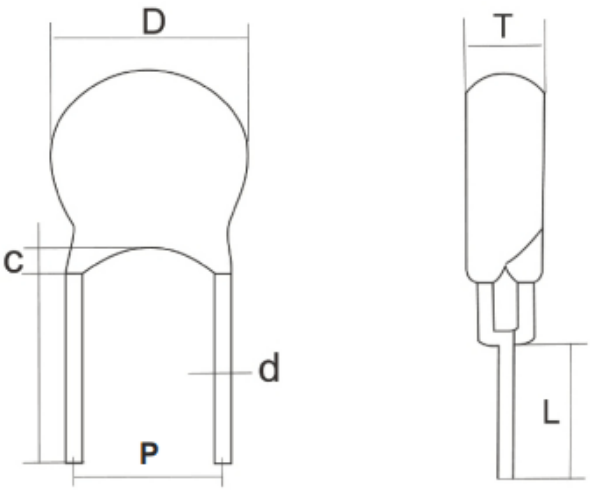
Code 0: Long straight lead



Code 2: Outside kink lead



Code 4: inside kink lead



Code 8: Y kink lead