

# Fixed capacitors of electromagnetic interference suppression and connection to the supply mains (Y1) Data Sheet





## Feature

- Wide operating voltage range from 10pF to 4700pF
- Operating Temperature: -40°C ~ 125°C
- Storage Temperature: 15°C ~ 35°C
- Fix capacitors Y1 for electromagnetic 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

## Applicable Standard

Approval	Organization	Safety Standards	Certificate No.
USA Canada	 UL CUL	UL60384	E208107
Korea	 KTL	K60384-14	SU03031-7002
China	 CQC	GB/T 6346.14-2015	CQC06001018610
Germany	 VDE	En 60384-14	40025754

Approval		Organization	Safety Standards	Certificate No.
EU		ENEC	En 60384-14	40025754
IEC		IEC-CB	IEC 60384-14	US-21746-UL

## Part Number Code

Q	09	F	1	D	222	M	N0	B	0	S	0	N	0
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**Rated Voltage**  
Q:Y1

**Core Diameter**  
09:9mm  
15:15mm

**Temperature Characteristic**  
S:SL  
B:Y5P  
E:Y5U  
F:Y5V

**Pitch**  
D:10.0mm

**Tolerance**  
K:±10%  
M:±20%

**Package**  
B: Bulk  
T: Tape

**Inner Management**

**Nominal capacitance**  
470:47pF  
471:470pF  
222:2200pF  
103:10000pF

**Environmental Standard**  
0:RoHS  
2:RoHS+Halogen

**Foot Type**  
1:Long straight  
2:Outside Crimped  
3:Short Straight  
8:Vertical Crimped

**Lead Length**  
S0~S9:1.0~1.9mm  
X0~X9:2.0~2.9mm  
A0~A9:3.0~3.9mm  
B0~B9:4.0~4.9mm  
C0~C9:5.0~5.9mm  
D0~D9:6.0~6.9mm  
E0~E9:7.0~7.9mm

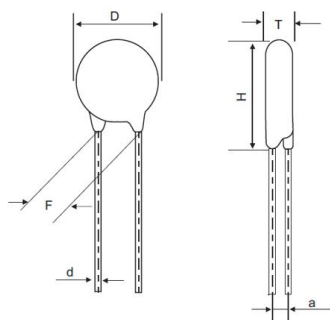
**Lead Length**  
F0~F9:8.0~8.9mm  
G0~G9:9.0~9.9mm  
H0~H9:10.0~10.9mm  
J0~J9:11.0~11.9mm  
K0~K9:12.0~12.9mm  
L0~L9:13.0~13.9mm  
M0~M9:14.0~14.9mm

**Lead Length**  
M0~M9:14.0~14.9mm  
N0:16~27.0mm(Bulk)  
H0=16.5(Taped)  
Taping  
PO:17.0mm  
Q0:20.0mm

## Specifications

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

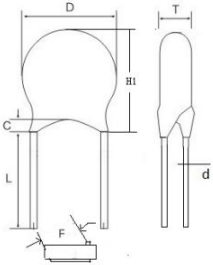
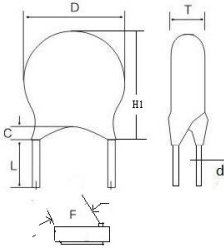
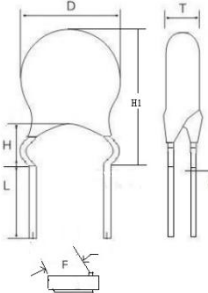
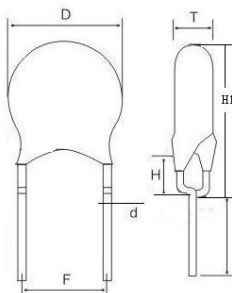
## Dimensions (mm) and Approval



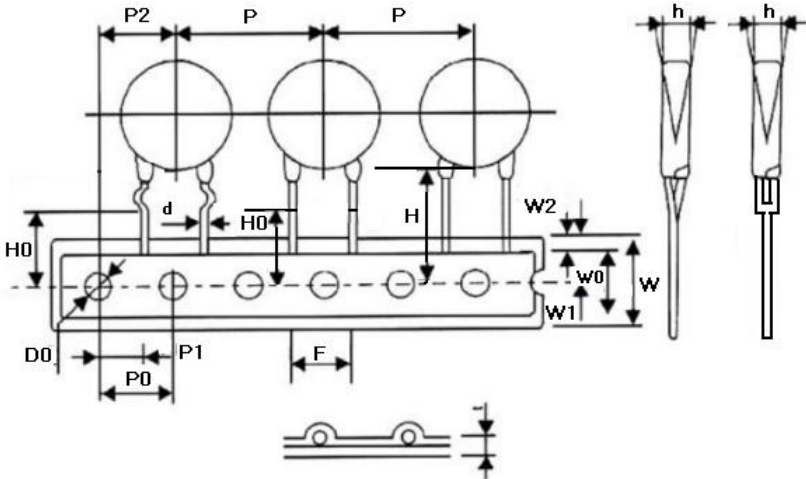
Part No.	Size (mm)				Approval				
	D Max.	T Max.	F±0.8	d±0.05	CQC	VDE	cUL (Canada)	KTL	ENEC
Y1-SL-100K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-200K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-220K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-330K	7.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-470K	8.0	4.0	10.0	0.6	√	√	√		√
Y1-SL-560K	8.0	4.0	10.0	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	0.7	√	√	√	√	√
Y1-Y5P-561K	10.0	5.0	10.0	0.7	√	√	√	√	√
Y1-Y5P-681K	10.0	5.0	10.0	0.7	√		√	√	

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	0.7	√	√	√	√	√
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	0.7	√	√	√	√	√
Y1-Y5U-222M	11.0	5.0	10.0	0.7	√	√	√	√	√
Y1-Y5U-332M	14.5	5.5	10.0	0.7	√	√	√	√	√
Y1-Y5U-472M	17.5	5.5	10.0	0.7	√	√	√	√	√
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	0.7	√	√	√	√	√
Y1-Y5V-332M	11.0	5.5	10.0	0.7	√	√	√	√	√
Y1-Y5V-472M	12.0	5.5	10.0	0.7	√	√	√	√	√

## Lead Configuration

Lead Style	Drawing	Lead Length L (mm)	Coating Lead Length C (mm)	Height H (mm)
Long Straight		16.0 min	① C ≤ 2.5mm (Product diameter < 12mm)  ② C ≤ 3.0mm (Product diameter ≥ 12mm)	/
Short Straight		① [2.5 ≤ L < 6.0] ± 0.5; ② [6.0 ≤ L ≤ 10] ± 1.0	① C ≤ 2.5mm (Product diameter < 12mm)  ② C ≤ 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 Specification (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 +1.5/-1.0		
	L	Straight Lead	Crimped Lead	
		11.0 Max	9.0 Max	
	t1	0.5±0.2		
	t2	1.7 Max		