

## Ceramic Disc Capacitor Class 1 Temperature Compensation

### Features

- Linear Temperature coefficient of capacitance
- High Stability of capacitance
- Low loss at wide range of frequency



### Specification

Operating Temperature Range -25°C to +85°C

Rated Working Voltage DC 50V, 500V

Test Voltage 3 times of the rated voltage  
Capacitance Within the tolerance at 1MHz, 1±0.2 Vrms, 25°C

Q Factor At 1Mhz: 1±0.2 Vrms, 25°C  
C > 30pF ..... Q > 1,000  
C < 30pF ..... Q ≥ 400+20°C (C: Rated capacitance)

Insulation Resistance 10,000M ohm min.

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-54151736  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

Rated Volt. (VDC)	Temp. Char.	Capacitance		Dimensions (mm)		
		Range (pF)	Tolerance	D max	T max	F
50	CH 0±60 PPM/°C (NPO)	0.5 ~ 47	±0.5pF (under 10 pF)	5.5	3.5	5.0
		50 ~ 75		6.5		
		82 ~ 100	7.5			
		120 ~ 150	±5% & ±10% (Over 10 pF)	8.5		
		180 ~ 270		10.5		
300 ~ 390	12.5	5.0, 10.0				
50	SL +350 ~ - 1000PPM/°C	10 ~ 120	±5% & ±10%	5.5	3.5	5.0
		150 ~ 240		6.5		
		270 ~ 330		7.5		
		360 ~ 470		8.5		
		500 ~ 820		10.5		

## Class 2 High Dielectric Constant

### Features

- Large capacitance in small size
- Non liner temperature coefficient of capacitance

### Specification

Rated Working Voltage DC 50V, 500V

Test Voltage	2.5 times of the rated voltage
Capacitance	Within the tolerance at 1MHz, 1±0.2 Vrms, 25°C
Dissipation Factor	Y5P, Z5U : tanδ < 2.5% Z5V : tanδ < 5%
Insulation Resistance	10,000M ohm or 200M ohm μF, whichever is the smaller

Rated Volt. (VDC)	Temp. Char.	Capacitance		Dimensions (mm)					
		Range (pF)	Tolerance	D max	T max	F			
50	B ±10% (Y5P)	100 ~ 2000	±10% & ±20%	5.5	3.5	5.0			
		2000 . 2700		6.5					
		3000 . 3300		7.5					
		3900 . 4700		8.5					
		5600 . 6800		10.5					
		10000 . 2200 . 3300		5.5					
		4700 . 5000		±20 & +80-20%			7.5	3.5	5.0
		4600 . 6800							
		8200 . 10000							
		12000 . 15000							
50	E ±22 ~ 56% (Z5U)	18000 . 20000	+80-20%	10.5	3.5	5.0			
		22000 . 4700 . 5000		5.5					
		10000 . 15000		6.5					
		18000 . 20000		7.5					
		20000 . 30000		8.5					
		33000 . 40000		10.5					
50	F ±22 ~ 82% (Z5V)	20000 . 20000 . 30000	+80-20%	7.5	3.5	5.0			
		33000 . 40000		8.5					
				7.5					
				10.5					

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### Class 3 Semi Conductive Type

- Features
- Linear Temperature coefficient of capacitance
  - Stable capacitance change over the specified temperature
  - Low loss at wide range of frequency
  - Cost saving by replacing film capacitors.
  - Ultra large capacitance in small size

Operating Temperature Range -10°C to +85°C  
 Rated Working Voltage DC 16V, 25V, 50V  
 Test Voltage 2 times of the rated voltage  
 Dissipation Factor At 1Mhz: 0.1 Vrms, 25°C  
 Factor (tan  $\xi$ )  
 FY 16V 7.5%max  
 FY. RY 25/50 5%max  
 Insulation Resistance (at 25°C)  
 16V, 100M ohm  $\mu$ F or M ohm  $\mu$ f  
 whichever is less  
 25V/50V, 1000M ohm  $\mu$ F or 20 M ohm  $\mu$ F  
 whichever is less

Rated Volt. (VDC)	Temp. Char.	Capacitance		Dimensions (mm)		
		Range (pF)	Tolerance	D max	T max	F
50		20000 ~ 100000		5.5		
		20000 ~ 220000		10.5		
25	FY +22 ~ 82% (Y5V)	22000	$\pm 20\%$ & +80-20%	5.5	3.5	5.0
		33000 ~ 100000		6.5		
		200000 ~ 220000		10.5		
		22000		5.5		
50		33000 ~ 47000		6.5		
		100000		5.5		
		6800 ~ 10000		5.5		
		15000 ~ 22000		6.5		
50	RY $\pm 15\%$ (Y5R)	33000 ~ 47000	$\pm 10\%$ & $\pm 20\%$	7.5	3.5	5.0
		68000 ~ 100000		8.5		
		68000 ~ 10000		5.5		
		15000 ~ 22000		6.5		
50		33000 ~ 47000		8.5		
		68000		10.5		

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