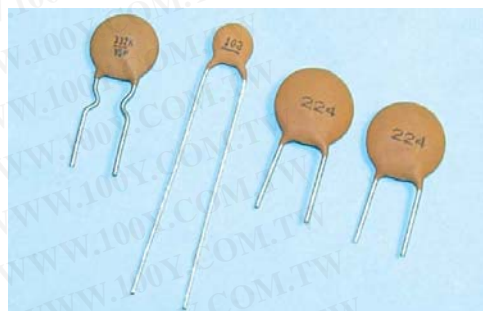


# Ceramic Disc Capacitor

## Class 1 Temperature Compensation

### Features

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



勝特力材料 886-3-5753170  
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|                             |   |
|-----------------------------|---|
| 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<br>C > 30pF ..... Q > 1,000<br>C < 30pF ..... Q ≥ 400+20°C (C: Rated capacitance) |
| Insulation Resistance       | 10,000M ohm min.  |

| Rated Volt. (VDC) | Temp. Char.                     | Capacitance |                               | Dimensions (mm) |       |     |
|-------------------|---------------------------------|-------------|-------------------------------|-----------------|-------|-----|
|                   |                                 | Range (pF)  | Tolerance                     | D max           | T max | F   |
| 50                | CH<br>0±60<br>PPM/°C<br>(NPO)   | 0.5 ~ 47    | ±0.5pF<br>(under 10 pF)       | 5.5             | 3.5   | 5.0 |
|                   |                                 | 50 ~ 75     |                               | 6.5             |       |     |
|                   |                                 | 82 ~ 100    | 7.5                           |                 |       |     |
|                   |                                 | 120 ~ 150   | ±5% &<br>±10%<br>(Over 10 pF) | 8.5             |       |     |
|                   |                                 | 180 ~ 270   |                               | 10.5            |       |     |
| 300 ~ 390         | 12.5                            | 5.0, 10.0   |                               |                 |       |     |
| 50                | SL<br>+350 ~<br>-<br>1000PPM/°C | 10 ~ 120    | ±5%<br>&<br>±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,  $1 \pm 0.2$   
 $V_{rms}$ , 25°C  
 Dissipation Factor Y5P, Z5U :  $\tan \delta < 2.5\%$   
 Z5V :  $\tan \delta < 5\%$   
 Insulation Resistance 10,000M ohm or 200M ohm  $\mu F$ ,  
 whichever is the smaller

| Rated Volt. (VDC) | Temp. Char.                      | Capacitance   |                            | Dimensions (mm) |       |     |
|-------------------|----------------------------------|---------------|----------------------------|-----------------|-------|-----|
|                   |                                  | Range (pF)    | Tolerance                  | D max           | T max | F   |
| 50                | B<br>$\pm 10\%$<br>(Y5P)         | 100 ~ 2000    | $\pm 10\%$ &<br>$\pm 20\%$ | 5.5             | 3.5   | 5.0 |
|                   |                                  | 2000 . 2700   |                            | 6.5             |       |     |
|                   |                                  | 3000 . 3300   |                            | 7.5             |       |     |
|                   |                                  | 3900 . 4700   |                            | 8.5             |       |     |
|                   |                                  | 5600 . 6800   |                            | 10.5            |       |     |
|                   |                                  | 10000         |                            | 5.5             |       |     |
|                   |                                  | 2200 . 3300   |                            |                 |       |     |
|                   |                                  | 4700 . 5000   |                            |                 |       |     |
|                   |                                  | 4600 . 6800   |                            |                 |       |     |
|                   |                                  | 8200          |                            |                 |       |     |
| 50                | E<br>$\pm 22 \sim 56\%$<br>(Z5U) | 10000         | $\pm 20$ &<br>$+80-20\%$   | 6.5             | 3.5   | 5.0 |
|                   |                                  | 12000 . 15000 |                            | 7.5             |       |     |
|                   |                                  | 18000 . 20000 |                            | 8.5             |       |     |
|                   |                                  | 22000         |                            | 10.5            |       |     |
|                   |                                  | 4700 . 5000   |                            | 5.5             |       |     |
|                   |                                  | 10000 . 15000 |                            | 6.5             |       |     |
|                   |                                  | 18000 . 20000 |                            | 7.5             |       |     |
|                   |                                  | 20000         |                            |                 |       |     |
|                   |                                  | 30000         |                            |                 |       |     |
|                   |                                  | 33000 . 40000 |                            |                 |       |     |
| 50                | F<br>$\pm 22 \sim 82\%$<br>(Z5V) | 20000         | $+80-20\%$                 | 7.5             | 3.5   | 5.0 |
|                   |                                  | 20000 . 30000 |                            | 8.5             |       |     |
|                   |                                  | 33000 . 40000 |                            | 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<br>+22 ~ 82%<br>(Y5V)  | 22000           |                          | 5.5             | 3.5   | 5.0 |
|                   |                           | 33000 ~ 100000  | $\pm 20\%$<br>&          | 6.5             |       |     |
|                   |                           | 200000 ~ 220000 | +80-20%                  | 10.5            |       |     |
|                   |                           | 22000           |                          | 5.5             |       |     |
| 50                |                           | 33000 ~ 47000   |                          | 6.5             |       |     |
|                   |                           | 100000          |                          | 5.5             |       |     |
|                   |                           | 6800 ~ 10000    |                          | 5.5             |       |     |
|                   |                           | 15000 ~ 22000   |                          | 6.5             |       |     |
| 50                | RY<br>$\pm 15\%$<br>(Y5R) | 33000 ~ 47000   |                          | 7.5             | 3.5   | 5.0 |
|                   |                           | 68000 ~ 100000  | $\pm 10$ &<br>$\pm 20\%$ | 8.5             |       |     |
|                   |                           | 68000 ~ 10000   |                          | 5.5             |       |     |
|                   |                           | 15000 ~ 22000   |                          | 6.5             |       |     |
| 50                |                           | 33000 ~ 47000   |                          | 8.5             |       |     |
|                   |                           | 68000           |                          | 10.5            |       |     |

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