Ceramic Disc Capacitors







GENERAL PURPOSE, HI-K (DIELECTRIC CONSTANT Class II/III) TYPE

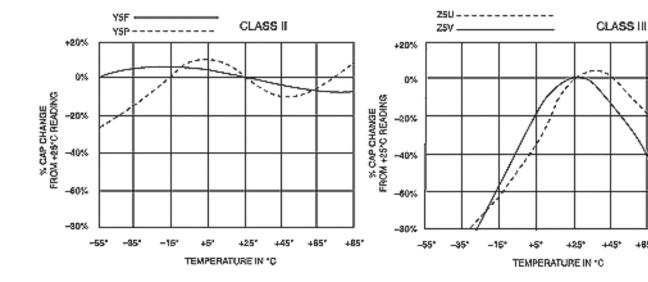
FEATURES

- WIDE SELECTION OF TEMPERATURE CHARACTERISTICS
- HIGH INSULATION RESISTANCE
- EXCELLENT HIGH FREQUENCY CHARACTERISTICS
- ECONOMICALLY PRICED
- AVAILABLE WITH FORMED LEADS AND ON TAPE FOR AUTOMATIC INSERTION

SPECIFICATIONS

| | erature cteristics | Y5F | Y5P | Z5U | Z5V | | | | | | |
|---|---|---|--|------------------------------|------------------------------|--|--|--|--|--|--|
| Operating Temperature Range | | -30°C ~ +85°C | -30°C ~ +85°C | +10°C ~ +85°C | +10°C ~ +85°C | | | | | | |
| Capacita | Capacitance Range | | 100pF ~ 0.01μF | $0.001 \mu F \sim 0.1 \mu F$ | $0.001 \mu F \sim 0.1 \mu F$ | | | | | | |
| Standard | Standard Tolerance | | ±10% (K) ±10% (K) | | +80%/-20% (Z) | | | | | | |
| Capacitance Change Over Temperature Range | | ±7.5% | ±10% | -55% ~ +22 | -82% ~ +22% | | | | | | |
| Dissipation Factor | | 2.5%* | 2.5%* | 5% | 5% | | | | | | |
| Insulation | Insulation Resistance | | Minimum 10,000 Megohms | | | | | | | | |
| Working Vo | Working Voltage Range | | 50Vdc ~ 1KVdc | | | | | | | | |
| | Dielectric Withstanding Voltage (Test Voltage) | | 2.5 Times Rated Voltage For Not Less Than 1 Second, 50mA Maximum | | | | | | | | |
| Load Life | Cap. Change | ±10% | ±10% | ±20% | ±30% | | | | | | |
| Test @ 85°C | D.F. (max.) | 4% | 4% | 7.5% | 7.5% | | | | | | |
| 1,000 Hours | I.R. (min.) | | 1,000 Megohms | | | | | | | | |
| Test Conditions | | 1KHz, 1.0V ±02Vrms 1KHz, 0.5V ± 0.1Vrms | | | | | | | | | |

^{*} Special low dissipation factor (1.0% max.) Y5F and Y5P dielectrics are also available. Contact NIC for availability.





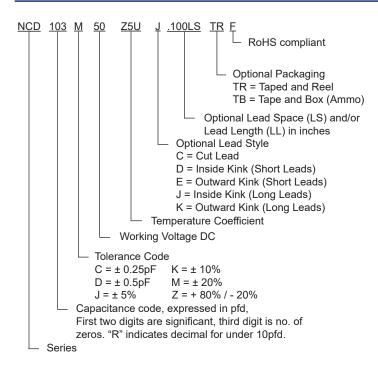
+85*

+85*





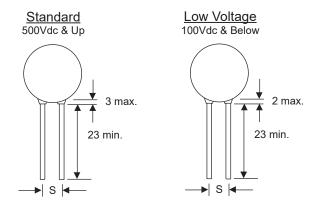




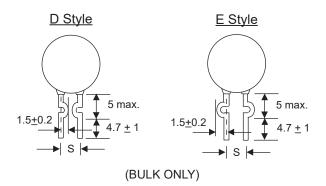
| Lead Spacing (mm) - S | | | | | | | | | | |
|-----------------------|------------|-----------|----------------------|----------------------|--|--|--|--|--|--|
| Body | Standard | Standard | Optional Bulk | Optional T&R | | | | | | |
| Diameter | Bulk | T&R | mm (inches) | mm (inches) | | | | | | |
| 5 ~ 11 | 6.35 ± 0.8 | 5.0 ± 0.8 | 5.0 ± 0.8 (0.200LS) | 2.5 ± 0.8 (0.100LS) | | | | | | |
| ≥12 | 6.35 ± 0.8 | 5.0 ± 0.8 | 7.5 ± 0.8 (0.295LS) | 7.5 ± 0.8 (0.295LS) | | | | | | |
| | | 3.0 ± 0.6 | 10.0 ± 0.8 (0.395LS) | 10.0 ± 0.8 (0.395LS) | | | | | | |

LEAD DIAMETER 0.6MM IS STANDARD

BODY THICKNESS 2 ~ 4MM DEPENDENT ON CV



J Style K Style 5 max. 1.5±0.2 3 min. BULK AND TAPED STYLES)



STANDARD PRODUCTS AND MAXIMUM DIAMETER (mm) BY T.C. AND VOLTAGE

| | Y | 75F/Y5P* Z5U Z5V | | | | | | | |
|-----------|-----------------------|------------------|-----|-----------|-----|----|-----------|-----|----|
| Сар. | Working Voltage (Vdc) | | | | | | | | |
| (pF/μF) | 50 100 | 500 | 1K | 50 100 | 500 | 1K | 50 100 | 500 | 1K |
| 100~470pF | 6 | 6 | 6 | - | - | - | - | - | - |
| 560 | 6 | 6 | 6 | - | - | - | - | - | - |
| 680 | 6 | 6 | 7 | - | - | - | - | - | - |
| 750 | 6 | 6 | 7 | - | - | - | - | - | - |
| 820 | 6 | 6 | 7 | - | - | - | - | - | - |
| 0.001μF | 6 | 7 | 7 | 6 | 6 | 6 | 5.5 | 6 | 6 |
| 0.0012 | 6 | 7 | 7/8 | 6 | 6 | 7 | 5.5 | 6 | 6 |
| 0.0015 | 6 | 8 | 8 | 6 | 8 | 8 | 5.5 | 6 | 7 |
| 0.0018 | 6 | 9 | 8 | 6 | 9 | 8 | 5.5 | 6 | 7 |
| 0.0022 | 6 | 9 | 10 | 6 | 7 | 7 | 6 | 6 | 7 |
| 0.0027 | 7 | 10 | 12 | 6 | 7 | 8 | 6 | 6 | 7 |
| 0.0033 | 7 | 10 | 14 | 6 | 7 | 9 | 6 | 7 | 8 |
| 0.0039 | 8 | 12 | 14 | 6 | 7 | 9 | 6 | 8 | 8 |
| 0.0047 | 8 | 12 | 14 | 6 | 8 | 10 | 6 | 8 | 8 |
| 0.0056 | 9 | 14 | 16 | 6 | 9 | 10 | 6 | 8 | 9 |
| 0.0068 | 9 | 14 | 16 | 7 | 9 | 12 | 6 | 8 | 10 |
| 0.0082 | 11 | 16 | 18 | 7 | 10 | 12 | 6 | 9 | 10 |
| 0.01 | 12 | 16 | 18 | 7 | 10 | 12 | 6 | 9 | 10 |
| 0.022 | - | - | - | 10 | 16 | 18 | 8.5 | 14 | 16 |
| 0.033 | - | - | - | 8 | 18 | 22 | 7 | 16 | 18 |
| 0.047 | - | - | - | - | 21 | - | 7 | 16 | 21 |
| 0.1 | - | - | - | 8/9 | - | - | 8/9 | - | - |

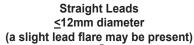
*.022µF AND ABOVE NOT AVAILABLE IN Y5F, PLEASE USE Y5P.
NIC RESERVES THE RIGHT TO REQUEST MINIMUM QUANTITIES ON
CERTAIN VALUES.

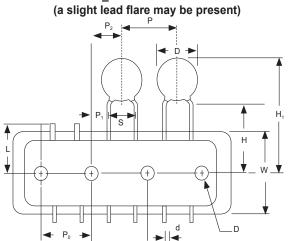




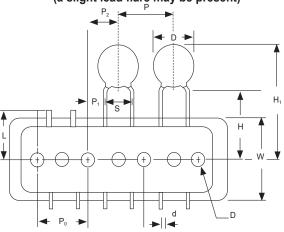


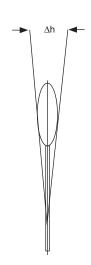
DIMENSIONS (mm)





Straight Leads
>12 ~ 23mm diameter
(a slight lead flare may be present)

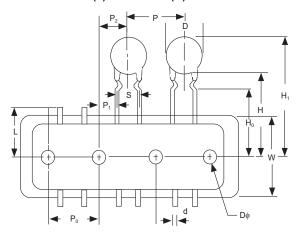


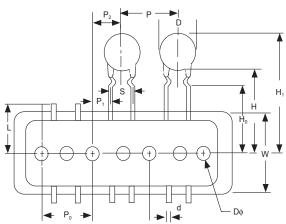


Crimped Leads ≤12mm diameter Inward (J) & Outward (K) are available

Crimped Leads >12 ~ 23mm diameter Inward (J) & Outward (K) are available







| Symbol | D max. | d | Р | P _o | P ₁ | P ₂ | S | Н | H _o | H ₁ | Дφ | W | L | t | Δh |
|------------------------|-------------|-------------|------|----------------|----------------|----------------|------|-----------------------|------------------|-----------------------|------|------|--------------|------|------|
| ≤ 12 Value >12 ~ 23 | | 0.6 | 12.7 | | 5.1 | 6.35 | 2.5 | | Applies to Dorte | 32.25 max. | | | | | |
| | <u>≤</u> 12 | | | | 3.85 | | 5.0 | | | | | | | | |
| | | | | 3.18 | | 6.35 | | Applies to Parts with | max. | | | | ĺ | | |
| | .40 00 | 0.6 0.8* | 25.4 | 12.7 | 8.95 | - 12.7 | 7.5 | 20.0 | Crimped Leads | H max. + D max. | 4.0 | 18.0 | 11.0 max. | 0.6 | 0.0 |
| | >12~23 | | | | 7.7 | | 9.5 | | | | | | | | |
| Tolerance - | ≤ 12 | +0.06 | ±1.0 | ±0.2 | ±0.7 | ±1.0 | +0.8 | | +115 | | ±0.2 | ±0.5 | | ±0.3 | ±2.0 |
| | >12 ~ 23 | -0.05 | ±1.0 | ±0.2 | ±1.5 | ±1.3 | -0.2 | | | | | | | | |

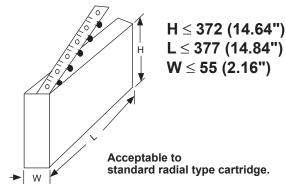
^{*}Lead diameter dependent on capacitor diameter. Contact NIC for details



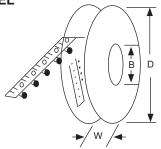








REEL



D ≤ 354 (13.93")
B ≥ 21 (.83") but
≤ 30 (1.18")
W ≤ 55 (2.16")

Acceptable to standard radial type cartridge with a few extra accessories.

PART NUMBER SUFFIX FOR OPTIONAL TAPE & REEL OR TAPE & BOX PACKAGING

Tape & Reel Straight Lead Options

TRF = Tape & Reel with 5mm lead-space

TR.100LSF = Tape & Reel with 2.0mm lead-space

TR.250LSF = Tape & Reel with 6.35mm lead-space

TR.300LSF = Tape & Reel with 7.5mm lead-space

TR.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Reel Crimped Lead Options (J = Inward Crimp, K = Outward Crimp)

JTRF or KTRF = Tape & Reel with 5mm lead-space

JTR.250LSF or KTR.250LSF = Tape & Reel with 6.35mm lead-space

JTR.300LSF or KTR.300LSF = Tape & Reel with 7.5mm lead-space

JTR.375LSF or KTR.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Box Straight Lead Options

TBF = Tape & Reel with 5mm lead-space

TB.100LSF = Tape & Reel with 2.0mm lead-space

TB.250LSF = Tape & Reel with 6.35mm lead-space

TB.300LSF = Tape & Reel with 7.5mm lead-space

TB.375LSF = Tape & Reel with 9.5mm lead-space

Tape & Box Crimped Lead Options (J = Inward Crimp, K = Outward Crimp)

JTBF or KTBF = Tape & Reel with 5mm lead-space

JTB.250LSF or KTBR.250LSF = Tape & Reel with 6.35mm lead-space

JTB.300LSF or KTB.300LSF = Tape & Reel with 7.5mm lead-space

JTB.375LSF or KTB.375LSF = Tape & Reel with 9.5mm lead-space

Notes:

- 1. The above lead-space options may not be available in all part diameters. Contact NIC for details.
- 2. Inward "J style" and outward "K style" may not be available in all part diameters and voltages. Contact NIC for details.