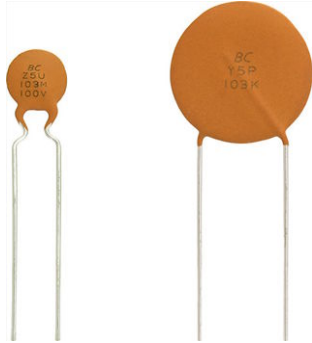


Ceramic Singlelayer DC Disc Capacitors for General Purpose Class 1, Class 2 and Class 3, 50 V_{DC}, 100 V_{DC}, 500 V_{DC}


FEATURES

- High capacitance with small size
- High reliability
- Crimp and straight lead styles
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912


**RoHS
COMPLIANT**
APPLICATIONS

- Temperature compensation
- Coupling and decoupling
- Bypassing

| QUICK REFERENCE DATA | | | | | | | | |
|----------------------------|--------------|----------|--------------|--------|------|------|--------------|---------|
| DESCRIPTION | VALUE | | | | | | | |
| Ceramic Class | 1 | | 2 | | | | 3 | |
| Ceramic Dielectric | SL0 | N750 | Y5P | Z5U | X7R | X5F | Y5V | Z5V |
| Voltage (V _{DC}) | 50, 100, 500 | 100, 500 | 50, 100, 500 | | 500 | | 50, 100, 500 | 50, 100 |
| Min. Capacitance (pF) | 56 | 6.8 | 100 | 1000 | 100 | 100 | 1000 | 4700 |
| Max. Capacitance (pF) | 100 | 330 | 10 000 | 22 000 | 4700 | 4700 | 22 000 | 47 000 |
| Mounting | Radial | | | | | | | |

MARKING

Marking indicates capacitance value and tolerance in accordance with “EIA 198” and voltage marks.

OPERATING TEMPERATURE RANGE

SL0, N750, X7R, X5F: -55 °C to +125 °C

Y5P, Z5U, Z5V, Y5V: -30 °C to +125 °C

TEMPERATURE CHARACTERISTICS

Class 1: SL0, N750

Class 2: Y5P, Z5U, X7R, X5F

Class 3: Y5V, Z5V

SECTIONAL SPECIFICATIONS

Climatic category (acc. to EN 60058-1)

Class 1 and 2: 55/125/21

Class 3: 30/85/21

APPROVALS

EIA 198

IEC 60384-8

IEC 60384-9

CAPACITANCE RANGE

6.8 pF to 47 nF

TOLERANCE ON CAPACITANCE

± 0.25 pF, ± 2 %, ± 5 %, ± 10 %, ± 20 %, + 80 % / - 20 %

RATED VOLTAGE

50 V_{DC}, 100 V_{DC}, 500 V_{DC}

TEST VOLTAGE

250 % of rated voltage

INSULATION RESISTANCE AT RATED VOLTAGE

10 GΩ min.

DISSIPATION FACTOR

Class 1 0.1 % max. when C ≥ 30 pF
(at 1 MHz; 1 V where C ≤ 1000 pF, and at 1 kHz; 1 V where C > 1000 pF)

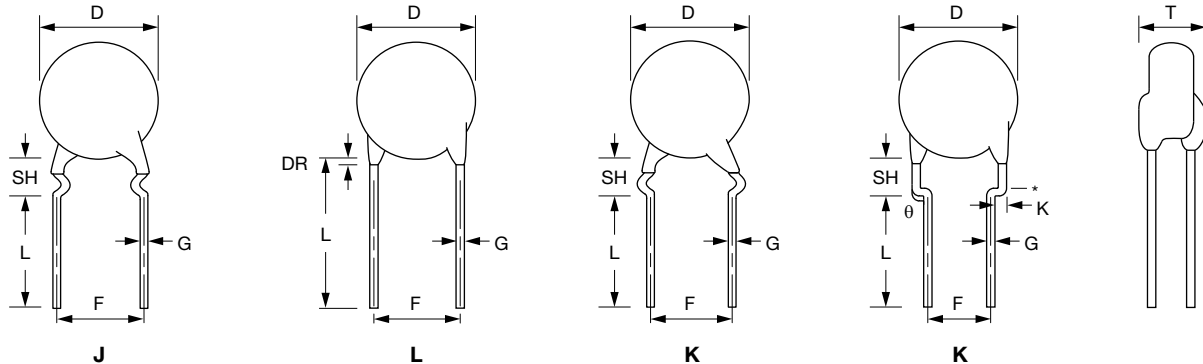
For C < 30 pF: DF = 100/(400 + 20 x C)

DF = dissipation factor in %;

C = capacitance value in pF

Class 2 2.5 % max. (at 1 kHz; 1 V)

Class 3 5 % max. (at 1 kHz; 1 V)

LEAD CONFIGURATION (in millimeters)

Note

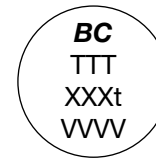
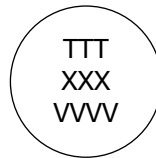
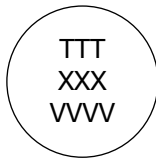
- Lead-spacing 2.5 mm is available for L lead configuration only.

MARKING

Size 20

Size 25

Size 29 and above


Note

- Refer to specified part for detail marking.

ORDERING CODE INFORMATION

| D | 102 | K | 25 | Y5P | L | 6 | 3 | J | 5 | R |
|--------------|--|--|------------------------------------|------------------------------------|--|--------------------------|---|------------------------------------|--|----------------|
| 1 | 2 3 4 | 5 | 6 7 | 8 9 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Product Type | Capacitance (pF) | Capacitance Tolerance | Size Code | T.C. Code | Rated Voltage | Lead Diameter | Packaging / Lead Length | Lead Style | Lead Spacing | RoHS Compliant |
| D series | The first two digits are the significant figures of capacitance and the last digit is a multiplier as follows: 0 = * 1 1 = * 10 2 = * 100 3 = * 1000 | C = ± 0.25 pF G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80 % / -20 % | Please refer to relevant datasheet | Please refer to relevant datasheet | F = 50 V _{DC} H = 100 V _{DC} L = 500 V _{DC} | 6 = 0.60 mm ± 0.05 mm | 3 = bulk T = tape and reel U = ammo | Please refer to relevant datasheet | 2 = 2.5 mm 5 = 5.0 mm 6 = 6.4 mm 7 = 7.5 mm | |



ORDERING CODES

| DIELECTRIC SLO (50 V _{DC} / 100 V _{DC}) | | | | | | |
|--|--------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 50 V _{DC} | | | 100 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 56 | D560#20SLOF6###R | 5 | 3.5 | D560#20SLOH6###R | 5 | 3.5 |
| 68 | D680#20SLOF6###R | 5 | 3.5 | D680#20SLOH6###R | 5 | 3.5 |
| 82 | D820#20SLOF6###R | 5 | 3.5 | D820#20SLOH6###R | 5 | 3.5 |
| 100 | D101#20SLOF6###R | 5 | 3.5 | D101#20SLOH6###R | 5 | 3.5 |

| DIELECTRIC SLO (500 V _{DC}) | | | |
|---------------------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 33 | D330#20SLOL6###R | 5 | 3.5 |
| 39 | D390#20SLOL6###R | 5 | 3.5 |
| 47 | D470#20SLOL6###R | 5 | 3.5 |
| 56 | D560#20SLOL6###R | 5 | 3.5 |
| 68 | D680#20SLOL6###R | 6.5 | 3.5 |
| 82 | D820#20SLOL6###R | 6.5 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: $\pm 5\%$ = J; $\pm 10\%$ = K
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

| DIELECTRIC N750 | | | | | | |
|-----------------|---------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 100 V _{DC} | | | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 6.8 | D689C20U2JH6###R | 5 | 3.5 | D689C20U2JL6###R | 5 | 3.5 |
| 8.2 | D829C20U2JH6###R | 5 | 3.5 | D829C20U2JL6###R | 5 | 3.5 |
| 10 | D100#20U2JH6###R | 5 | 3.5 | D100#20U2JL6###R | 5 | 3.5 |
| 12 | D120#20U2JH6###R | 5 | 3.5 | D120#20U2JL6###R | 5 | 3.5 |
| 15 | D150#20U2JH6###R | 5 | 3.5 | D150#20U2JL6###R | 5 | 3.5 |
| 18 | D180#20U2JH6###R | 5 | 3.5 | D180#20U2JL6###R | 5 | 3.5 |
| 22 | D220#20U2JH6###R | 5 | 3.5 | D220#20U2JL6###R | 5 | 3.5 |
| 27 | D270#20U2JH6###R | 5 | 3.5 | D270#25U2JL6###R | 6.5 | 3.5 |
| 33 | D330#20U2JH6###R | 5 | 3.5 | D330#25U2JL6###R | 6.5 | 3.5 |
| 39 | D390#20U2JH6###R | 5 | 3.5 | D390#29U2JL6###R | 7.5 | 3.5 |
| 47 | D470#20U2JH6###R | 5 | 3.5 | D470#29U2JL6###R | 7.5 | 3.5 |
| 56 | D560#25U2JH6###R | 6.5 | 3.5 | D560#33U2JL6###R | 8.5 | 3.5 |
| 68 | D680#25U2JH6###R | 6.5 | 3.5 | D680#33U2JL6###R | 8.5 | 3.5 |
| 82 | D820#25U2JH6###R | 6.5 | 3.5 | D820#39U2JL6###R | 10 | 3.5 |
| 100 | D101#29U2JH6###R | 7.5 | 3.5 | D101#39U2JL6###R | 10 | 3.5 |
| 120 | D121#33U2JH6###R | 8.5 | 3.5 | D121#47U2JL6###R | 12 | 3.5 |
| 150 | D151#33U2JH6###R | 8.5 | 3.5 | D151#47U2JL6###R | 12 | 3.5 |
| 180 | D181#39U2JH6###R | 10 | 3.5 | / | / | / |
| 220 | D221#39U2JH6###R | 10 | 3.5 | / | / | / |
| 270 | D271#39U2JH6###R | 10 | 3.5 | / | / | / |
| 330 | D331#47U2JH6###R | 12 | 3.5 | / | / | / |

Notes

- Lead diameter is 0.5 mm
- # 5th digit is capacitance tolerance code: $\pm 2\%$ = G; $\pm 5\%$ = J (which C < 10 pF, the tolerance code is C = ± 0.25 pF)
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



| DIELECTRIC Y5P (50 V_{DC} / 100 V_{DC}) | | | | | | |
|--|--------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 50 V _{DC} | | | 100 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 100 | D101#20Y5PF6###R | 5.0 | 3.5 | D101#20Y5PH6###R | 5.0 | 3.5 |
| 150 | D151#20Y5PF6###R | 5.0 | 3.5 | D151#20Y5PH6###R | 5.0 | 3.5 |
| 180 | D181#20Y5PF6###R | 5.0 | 3.5 | D181#20Y5PH6###R | 5.0 | 3.5 |
| 220 | D221#20Y5PF6###R | 5.0 | 3.5 | D221#20Y5PH6###R | 5.0 | 3.5 |
| 330 | D331#20Y5PF6###R | 5.0 | 3.5 | D331#20Y5PH6###R | 5.0 | 3.5 |
| 470 | D471#20Y5PF6###R | 5.0 | 3.5 | D471#20Y5PH6###R | 5.0 | 3.5 |
| 680 | D681#20Y5PF6###R | 5.0 | 3.5 | D681#20Y5PH6###R | 5.0 | 3.5 |
| 1000 | D102#20Y5PF6###R | 5.0 | 3.5 | D102#20Y5PH6###R | 5.0 | 3.5 |
| 1500 | D152#20Y5PF6###R | 5.0 | 3.5 | D152#25Y5PH6###R | 6.5 | 3.5 |
| 1800 | D182#25Y5PF6###R | 6.5 | 3.5 | D182#25Y5PH6###R | 6.5 | 3.5 |
| 2200 | D222#25Y5PF6###R | 6.5 | 3.5 | D222#25Y5PH6###R | 6.5 | 3.5 |
| 3300 | D332#25Y5PF6###R | 6.5 | 3.5 | D332#29Y5PH6###R | 7.5 | 3.5 |
| 4700 | D472#29Y5PF6###R | 7.5 | 3.5 | D472#33Y5PH6###R | 8.5 | 3.5 |
| 6800 | D682#33Y5PF6###R | 8.5 | 3.5 | D682#39Y5PH6###R | 10.0 | 3.5 |
| 10 000 | D103#39Y5PF6###R | 10.0 | 3.5 | D103#43Y5PH6###R | 11.0 | 3.5 |

| DIELECTRIC Y5P (500 V_{DC}) | | | |
|--|---------------------|-----------------------|------------------------|
| CAP. (pF) | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 100 | D101#20Y5PL6###R | 5.0 | 3.5 |
| 150 | D151#20Y5PL6###R | 5.0 | 3.5 |
| 180 | D181#20Y5PL6###R | 5.0 | 3.5 |
| 220 | D221#20Y5PL6###R | 5.0 | 3.5 |
| 330 | D331#20Y5PL6###R | 5.0 | 3.5 |
| 470 | D471#20Y5PL6###R | 5.0 | 3.5 |
| 680 | D681#25Y5PL6###R | 6.5 | 3.5 |
| 1000 | D102#25Y5PL6###R | 6.5 | 3.5 |
| 1500 | D152#29Y5PL6###R | 7.5 | 3.5 |
| 1800 | D182#29Y5PL6###R | 7.5 | 3.5 |
| 2200 | D222#33Y5PL6###R | 8.5 | 3.5 |
| 3300 | D332#39Y5PL6###R | 10.0 | 3.5 |
| 4700 | D472#43Y5PL6###R | 11.0 | 3.5 |
| 6800 | D682#53Y5PL6###R | 13.5 | 3.5 |
| 10 000 | D103#69Y5PL6###R | 17.5 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 10 % = K; ± 20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



| DIELECTRIC Z5U (50 V_{DC} / 100 V_{DC}) | | | | | | |
|--|--------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 50 V _{DC} | | | 100 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 1000 | D102M20Z5UF6###R | 5.0 | 3.5 | D102M20Z5UH6###R | 5.0 | 3.5 |
| 1500 | D152M20Z5UF6###R | 5.0 | 3.5 | D152M20Z5UH6###R | 5.0 | 3.5 |
| 2200 | D222M20Z5UF6###R | 5.0 | 3.5 | D222M20Z5UH6###R | 5.0 | 3.5 |
| 3300 | D332M20Z5UF6###R | 5.0 | 3.5 | D332M20Z5UH6###R | 5.0 | 3.5 |
| 4700 | D472M20Z5UF6###R | 5.0 | 3.5 | D472M25Z5UH6###R | 6.5 | 3.5 |
| 6800 | D682M25Z5UF6###R | 8.5 | 3.5 | D682M25Z5UH6###R | 6.5 | 3.5 |
| 10 000 | D103M29Z5UF6###R | 10.0 | 3.5 | D103M29Z5UH6###R | 7.5 | 3.5 |
| 15 000 | D153M33Z5UF6###R | 8.5 | 3.5 | D153M33Z5UH6###R | 8.5 | 3.5 |
| 22 000 | D223M39Z5UF6###R | 10.0 | 3.5 | D223M39Z5UH6###R | 10.0 | 3.5 |

| DIELECTRIC Z5U (500 V_{DC}) | | | |
|--|---------------------|-----------------------|------------------------|
| CAP. (pF) | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 1000 | D102M20Z5UL6###R | 5.0 | 3.5 |
| 1500 | D152M25Z5UL6###R | 6.5 | 3.5 |
| 2200 | D222M25Z5UL6###R | 6.5 | 3.5 |
| 3300 | D332M29Z5UL6###R | 7.5 | 3.5 |
| 4700 | D472M33Z5UL6###R | 8.5 | 3.5 |
| 6800 | D682M39Z5UL6###R | 10.0 | 3.5 |
| 10 000 | D103M43Z5UL6###R | 11.0 | 3.5 |
| 15 000 | D153M53Z5UL6###R | 13.5 | 3.5 |
| 22 000 | D223M59Z5UL6###R | 15.0 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



| DIELECTRIC Y5V (50 V _{DC} / 100 V _{DC}) | | | | | | |
|--|--------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 50 V _{DC} | | | 100 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 1000 | D102Z20Y5VF6###R | 5.0 | 3.5 | D102Z20Y5VH6###R | 5.0 | 3.5 |
| 1500 | D152Z20Y5VF6###R | 5.0 | 3.5 | D152Z20Y5VH6###R | 5.0 | 3.5 |
| 2200 | D222Z20Y5VF6###R | 5.0 | 3.5 | D222Z20Y5VH6###R | 5.0 | 3.5 |
| 3300 | D332Z20Y5VF6###R | 5.0 | 3.5 | D332Z20Y5VH6###R | 5.0 | 3.5 |
| 4700 | D472Z20Y5VF6###R | 5.0 | 3.5 | D472Z25Y5VH6###R | 6.5 | 3.5 |
| 6800 | D682Z25Y5VF6###R | 6.5 | 3.5 | D682Z25Y5VH6###R | 6.5 | 3.5 |
| 10 000 | D103Z29Y5VF6###R | 7.5 | 3.5 | D103Z29Y5VH6###R | 7.5 | 3.5 |
| 15 000 | D153Z33Y5VF6###R | 8.5 | 3.5 | D153Z33Y5VH6###R | 8.5 | 3.5 |
| 22 000 | D223Z39Y5VF6###R | 10.0 | 3.5 | D223Z39Y5VH6###R | 10.0 | 3.5 |

| DIELECTRIC Y5V (500 V _{DC}) | | | |
|---------------------------------------|------------------|-----------------------|------------------------|
| CAP. (pF) | ORDERING CODE | 500 V _{DC} | |
| | | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 1000 | D102Z20Y5VL6###R | 5.0 | 3.5 |
| 1500 | D152Z20Y5VL6###R | 5.0 | 3.5 |
| 2200 | D222Z25Y5VL6###R | 6.5 | 3.5 |
| 3300 | D332Z25Y5VL6###R | 6.5 | 3.5 |
| 4700 | D472Z29Y5VL6###R | 7.5 | 3.5 |
| 6800 | D682Z33Y5VL6###R | 8.5 | 3.5 |
| 10 000 | D103Z39Y5VL6###R | 10.0 | 3.5 |
| 15 000 | D153Z43Y5VL6###R | 11.0 | 3.5 |
| 22 000 | D223Z53Y5VL6###R | 13.5 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

| DIELECTRIC Z5V | | | | | | |
|----------------|--------------------|-----------------------|------------------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 50 V _{DC} | | | 100 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 4700 | D472Z20Z5VF6###R | 5.0 | 3.5 | D472Z20Z5VH6###R | 6.5 | 3.5 |
| 10 000 | D103Z25Z5VF6###R | 6.5 | 3.5 | D103Z25Z5VH6###R | 7.5 | 3.5 |
| 22 000 | D223Z29Z5VF6###R | 7.5 | 3.5 | D223Z33Z5VH6###R | 8.5 | 3.5 |
| 33 000 | D333Z39Z5VF6###R | 10.0 | 3.5 | D333Z39Z5VH6###R | 10.0 | 3.5 |
| 47 000 | D473Z39Z5VF6###R | 10.0 | 3.5 | D473Z43Z5VH6###R | 11.0 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



| DIELECTRIC X5F | | | |
|----------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 100 | D101#20X5FL6###R | 5.0 | 3.5 |
| 150 | D151#20X5FL6###R | 5.0 | 3.5 |
| 220 | D221#20X5FL6###R | 5.0 | 3.5 |
| 330 | D331#20X5FL6###R | 5.0 | 3.5 |
| 470 | D471#25X5FL6###R | 6.5 | 3.5 |
| 680 | D681#25X5FL6###R | 6.5 | 3.5 |
| 1,000 | D102#29X5FL6###R | 7.5 | 3.5 |
| 1,500 | D152#33X5FL6###R | 8.5 | 3.5 |
| 2,200 | D222#39X5FL6###R | 10.0 | 3.5 |
| 3,300 | D332#47X5FL6###R | 12.0 | 3.5 |
| 4,700 | D472#53X5FL6###R | 13.5 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 10 % = K; ± 20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

| DIELECTRIC X7R | | | |
|----------------|---------------------|-----------------------|------------------------|
| CAP. (pF) | 500 V _{DC} | | |
| | ORDERING CODE | DIAMETER (mm max.) | THICKNESS (mm max.) |
| 100 | D101#20X7RL6###R | 5.0 | 3.5 |
| 150 | D151#20X7RL6###R | 5.0 | 3.5 |
| 220 | D221#20X7RL6###R | 5.0 | 3.5 |
| 330 | D331#20X7RL6###R | 5.0 | 3.5 |
| 470 | D471#20X7RL6###R | 5.0 | 3.5 |
| 560 | D561#25X7RL6###R | 6.5 | 3.5 |
| 680 | D681#25X7RL6###R | 6.5 | 3.5 |
| 1,000 | D102#29X7RL6###R | 7.5 | 3.5 |
| 1,500 | D152#29X7RL6###R | 8.5 | 3.5 |
| 2,200 | D222#39X7RL6###R | 10.0 | 3.5 |
| 3,300 | D332#43X7RL6###R | 12.0 | 3.5 |
| 4,700 | D472#53X7RL6###R | 13.5 | 3.5 |

Notes

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 10 % = K; ± 20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

TAPING AND PACKAGING

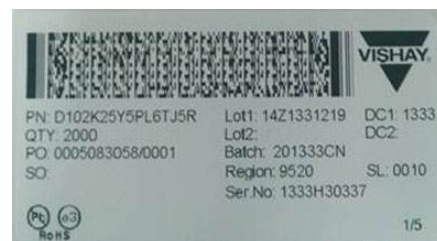
LABELLING

Each reel is provided with a label showing the following details:

manufacturer, D style, capacitance, tolerance, batch number, quantity of components, rated voltage, dielectric.

On special request other designations can be shown.

For example:



| PACKAGING QUANTITIES AND BOX DIMENSIONS | | | | | |
|---|-----------|-------------------|---------------|-----------------------------------|-------------------------------|
| PACKAGING | SIZE CODE | LEAD SPACING (mm) | RATED VOLTAGE | SMALLEST PACKAGING QUANTITY (SPQ) | BOX DIMENSIONS L x W x H (mm) |
| Tape on reel | ≤ 47 | ≤ 6.4 | < 500 | 2500 | 370 x 370 x 60 |
| | | > 6.4 | 500 | 2000 | |
| | > 47 | All | All | 1000 | |
| Ammopack | ≤ 47 | ≤ 6.4 | ≤ 500 | 2000 | 335 x 240 x 50 |
| | | > 6.4 | | 1500 | 335 x 290 x 50 |
| | > 47 | > 6.4 | | 1000 | |
| Bulk ⁽¹⁾ | < 49 | All | All | 1000 | 245 x 120 x 65 |
| | ≥ 49 | All | All | 500 | |

Note

(1) SPQ contains one or a multiple of poly-bags, 1000 units per bag.

| CAPACITORS ON TAPE | | | | |
|--|----------------|---------------------|---------------------|--------------------|
| | | | | |
| PARAMETER | SYMBOL | DIMENSIONS (mm) | | |
| Body diameter | D | 11.0 Max. | 11.0 Max. | 14.0 Max. |
| Lead diameter | d | 0.6 ± 0.05 | 0.6 ± 0.05 | 0.6 ± 0.05 |
| Pitch of component | p | 12.7 ± 1.0 | 12.7 ± 1.0 | 15.0 ± 1.0 |
| Pitch of sprocket hole | P ₀ | 12.7 ± 0.3 | 12.7 ± 0.3 | 15.0 ± 0.3 |
| Distance, hole center to lead | P ₁ | 5.1 ± 0.7 | 3.85 ± 0.7 | 3.75 ± 0.7 |
| Distance, hole to center of component | P ₂ | 6.35 ± 1.3 | 6.35 ± 1.3 | 7.5 ± 1.5 |
| Lead spacing | F | 2.5 + 0.60 / - 0.40 | 5.0 + 0.60 / - 0.40 | 7.5 + 0.6 / - 0.4 |
| Average deviation across tape | Δh | ± 1.0 max. | ± 1.0 max. | ± 1.0 max. |
| Average deviation in direction of reeling | ΔP | ± 1.0 max. | ± 1.0 max. | ± 1.0 max. |
| Carrier tape width | W | 18.0 + 1.0 / - 0.5 | 18.0 + 1.0 / - 0.5 | 18.0 + 1.0 / - 0.5 |
| Hold-down tape width | W ₀ | 5.0 min. | 5.0 min. | 5.0 min. |
| Position of sprocket hole | W ₁ | 9.0 + 0.75 / - 0.5 | 9.0 + 0.75 / - 0.5 | 9.0 + 0.75 / - 0.5 |
| Distance of hold-down tape | W ₂ | 3.0 max. | 3.0 max. | 3.0 max. |
| Maximum component height | H ₁ | 32 max. | 32 max. | 40 max. |
| Height to seating plane (for kinked leads) | H ₀ | 16.0 ± 0.5 | 16.0 ± 0.5 | 16.0 ± 0.5 |
| Height to seating plane (for straight leads) | H ₀ | 20.0 ± 0.5 | 20.0 ± 0.5 | 20.0 ± 0.5 |
| Length of cut leads | L | 11.0 max. | 11.0 max. | 11.0 max. |
| Length of lead protrusion | e | 1.0 max. | 1.0 max. | 1.0 max. |
| Diameter of sprocket hole | D ₀ | 4.0 ± 0.2 | 4.0 ± 0.2 | 4.0 ± 0.2 |
| Total tape thickness | t | 0.9 max. | 0.9 max. | 0.9 max. |
| Maximum thickness of taping and wires | t ₁ | 1.5 max. | 1.5 max. | 1.5 max. |

| RELATED DOCUMENTS | |
|---------------------|--|
| General Information | www.vishay.com/doc?28536 |



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