



Surface Mount Multilayer Ceramic Chip Capacitors MIL Qualified, Type CDR



FEATURES

- Military qualified products
- Federal stock control number, CAGE CODE 2770A
- High reliability tested per MIL-PRF-55681
- Tin / lead termination codes “W”, “Z”, and “U”
- Lead (Pb)-free termination codes “Y” and “M”
- Wet build process
- Reliable Noble Metal Electrode (NME) system
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

APPLICATIONS

- Avionic systems
- Sonar systems
- Satellite systems
- Missiles applications
- Geographical information systems
- Global positioning systems

ELECTRICAL SPECIFICATIONS

Note

- Electrical characteristics at +25 °C unless otherwise specified

Operating Temperature: -55 °C to +125 °C

Capacitance Range: 1.0 pF to 470 nF

Voltage Range: 6.3 V_{DC} to 100 V_{DC}

Temperature Coefficient of Capacitance (TCC):

BP: 0 ppm/°C ± 30 ppm/°C from -55 °C to +125 °C, with 0 V_{DC} applied
0 ppm/°C ± 30 ppm/°C from -55 °C to +125 °C, with 100 % rated V_{DC} applied

BX: ± 15 % from -55 °C to +125 °C, with 0 V_{DC} applied

BX: +15 %, -25 % from -55 °C to +125 °C, with 100 % rated V_{DC} applied

BR: ± 15 % from -55 °C to +125 °C, with 0 V_{DC} applied
+15 %, -40 % -55 °C to +125 °C, with 100 % rated V_{DC} applied

Dissipation Factor (DF):

BP: 0.15 % maximum
BX: 2.50 % maximum
BR: ≤ 25 V: 3.5 % maximum
> 25 V: 2.5 % maximum
Test frequency:
1 MHz ± 50 kHz for BP capacitors ≤ 1000 pF
and for BX capacitors ≤ 100 pF
All other BP, BX, and BR at 1 kHz ± 50 Hz

Aging Rate:

BP: 0 % maximum per decade
BX, BR: 1 % maximum per decade

Insulation Resistance (IR):

at +25 °C and rated voltage 100 000 MΩ minimum or 1000 ΩF, whichever is less

Dielectric Strength Test:

performed per method 103 of EIA-198-2-E.
Applied test voltages:
≤ 100 V_{DC}-rated: 250 % of rated voltage



| QUICK REFERENCE DATA | | | | |
|----------------------|--------------|---------------------|-------------|---------|
| DIELECTRIC | STYLE (CASE) | MAXIMUM VOLTAGE (V) | CAPACITANCE | |
| | | | MINIMUM | MAXIMUM |
| BP | CDR01 (0805) | 100 | 10 pF | 180 pF |
| BX | CDR01 (0805) | 100 | 120 pF | 4.7 nF |
| BP | CDR02 (1805) | 100 | 220 pF | 270 pF |
| BX | CDR02 (1805) | 100 | 3.9 nF | 22 nF |
| BP | CDR03 (1808) | 100 | 330 pF | 1.0 nF |
| BX | CDR03 (1808) | 100 | 12 nF | 68 nF |
| BP | CDR04 (1812) | 100 | 1.2 nF | 3.3 nF |
| BX | CDR04 (1812) | 100 | 39 nF | 180 nF |
| BX | CDR06 (2225) | 50 | 390 nF | 470 nF |
| BP | CDR31 (0805) | 100 | 1.0 pF | 680 pF |
| BX | CDR31 (0805) | 100 | 470 pF | 18 nF |
| BP | CDR32 (1206) | 100 | 1.0 pF | 2.2 nF |
| BX | CDR32 (1206) | 100 | 4.7 nF | 39 nF |
| BP | CDR33 (1210) | 100 | 1.0 nF | 3.3 nF |
| BX | CDR33 (1210) | 100 | 15 nF | 100 nF |
| BP | CDR34 (1812) | 100 | 2.2 nF | 10 nF |
| BX | CDR34 (1812) | 100 | 27 nF | 180 nF |
| BP | CDR35 (1825) | 100 | 4.7 nF | 22 nF |
| BX | CDR35 (1825) | 100 | 56 nF | 470 nF |
| BP | CDR36 (0603) | 100 | 51 pF | 1000 pF |
| BX | CDR36 (0603) | 100 | 100 pF | 56 nF |
| BR | CDR36 (0603) | 100 | 100 pF | 56 nF |
| BP | CDR37 (0402) | 100 | 22 pF | 150 pF |
| BX | CDR37 (0402) | 50 | 100 pF | 8.2 nF |
| BR | CDR37 (0402) | 50 | 100 pF | 10 nF |

Note

- Detail ratings see selection chart

| ORDERING INFORMATION - MILITARY | | | | | | | |
|--|----------------|--|--|--|--|--|--|
| CDR31 | BX | 102 | A | K | Y | S | A T |
| MILITARY STYLE | DIELECTRIC | CAPACITANCE NOMINAL CODE | DC VOLTAGE RATING ⁽¹⁾ | CAPACITANCE TOLERANCE ⁽²⁾ | TERMINATION | FAILURE RATE | MARKING PACKAGING |
| CDR01 CDR02 CDR03 CDR04 CDR06 CDR31 CDR32 CDR33 CDR34 CDR35 CDR36 CDR37 | BP BR BX | Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. Examples: 102 = 1000 pF 1R8 = 1.8 pF | W = 6.3 V X = 10 V Y = 16 V Z = 25 V A = 50 V B = 100 V | C = ± 0.25 pF D = ± 0.5 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % | M = silver palladium ⁽³⁾ Y = Ni barrier with 100 % tin W, Z = Ni barrier with tin / lead plate min. 4 % lead U = Ni barrier solder coated (min. of 4 % lead) | M = 1.0 % P = 0.1 % R = 0.01 % S = 0.001 % Consult factory for failure rate status | A = unmarked T = 7" reel / plastic tape J = 7" reel (low quantity) C = 7" reel / paper tape R = 11 1/4" / 13" reel / plastic tape P = 11 1/4" / 13" reel / paper tape B = bulk |

Notes

- (1) DC voltage rating should not be exceeded in application. Other application factors may affect the MLCC performance. Consult for questions: mlcc@vishay.com
- (2) Available tolerances please see rating chart
- (3) M termination not available for CDR36 and CDR37 parts

DIMENSIONS in inches (millimeters)


| MIL-PRF-55681 | STYLE | LENGTH (L) | WIDTH (W) | MAXIMUM THICKNESS (T) | TERM. (P) | |
|---------------|-------|-----------------------------|-----------------------------|-----------------------|--------------|--------------|
| | | | | | MINIMUM | MAXIMUM |
| /1 | CDR01 | 0.080 ± 0.015 (2.03 ± 0.38) | 0.050 ± 0.015 (1.27 ± 0.38) | 0.055 (1.40) | 0.010 (0.25) | 0.030 (0.75) |
| | CDR02 | 0.180 ± 0.015 (4.57 ± 0.38) | 0.050 ± 0.015 (1.27 ± 0.38) | 0.055 (1.40) | 0.010 (0.25) | 0.030 (0.75) |
| | CDR03 | 0.180 ± 0.015 (4.57 ± 0.38) | 0.080 ± 0.015 (2.03 ± 0.38) | 0.080 (2.03) | 0.010 (0.25) | 0.030 (0.75) |
| | CDR04 | 0.180 ± 0.015 (4.57 ± 0.38) | 0.125 ± 0.015 (3.20 ± 0.38) | 0.080 (2.03) | 0.010 (0.25) | 0.030 (0.75) |
| /3 | CDR06 | 0.225 ± 0.020 (5.72 ± 0.51) | 0.250 ± 0.020 (6.35 ± 0.51) | 0.080 (2.03) | 0.010 (0.25) | 0.030 (0.75) |
| /7 | CDR31 | 0.078 ± 0.008 (2.00 ± 0.20) | 0.049 ± 0.008 (1.25 ± 0.20) | 0.051 (1.30) | 0.012 (0.30) | 0.028 (0.70) |
| /8 | CDR32 | 0.125 ± 0.008 (3.20 ± 0.20) | 0.062 ± 0.008 (1.60 ± 0.20) | 0.051 (1.30) | 0.012 (0.30) | 0.028 (0.70) |
| /9 | CDR33 | 0.125 ± 0.010 (3.20 ± 0.25) | 0.098 ± 0.010 (2.50 ± 0.25) | 0.049 (1.25) | 0.010 (0.25) | 0.030 (0.75) |
| /10 | CDR34 | 0.176 ± 0.010 (4.50 ± 0.25) | 0.125 ± 0.010 (3.20 ± 0.25) | 0.059 (1.50) | 0.010 (0.25) | 0.030 (0.75) |
| /11 | CDR35 | 0.176 ± 0.012 (4.50 ± 0.30) | 0.250 ± 0.012 (6.40 ± 0.30) | 0.059 (1.50) | 0.008 (0.20) | 0.032 (0.80) |
| /12 | CDR36 | 0.063 ± 0.006 (1.60 ± 0.15) | 0.032 ± 0.006 (0.81 ± 0.15) | 0.036 (0.91) | 0.008 (0.20) | 0.020 (0.51) |
| /13 | CDR37 | 0.040 ± 0.004 (1.02 ± 0.10) | 0.020 ± 0.004 (0.51 ± 0.10) | 0.024 (0.61) | 0.004 (0.10) | 0.016 (0.41) |

SELECTION CHART

| DIELECTRIC | | BP | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| STYLE | | CDR37 | | | | |
| SLASH SHEET | | /13 | | | | |
| CASE CODE | | 0402 | | | | |
| VOLTAGE (V _{DC}) | | 10 | 16 | 25 | 50 | 100 |
| VOLTAGE CODE | | X | Y | Z | A | B |
| CAP. CODE | CAPACITANCE | | | | | |
| 220 | 22 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 240 | 24 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 270 | 27 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 300 | 30 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 330 | 33 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 360 | 36 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 390 | 39 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 430 | 43 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 470 | 47 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 510 | 51 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 560 | 56 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 620 | 62 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 680 | 68 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 750 | 75 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 820 | 82 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 910 | 91 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 101 | 100 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 121 | 120 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 151 | 150 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | | | | | | | | | |
|----------------------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DIELECTRIC | | BR | | | | | BX | | | | |
| STYLE | | CDR37 | | | | | CDR37 | | | | |
| SLASH SHEET | | /13 | | | | | /13 | | | | |
| CASE CODE | | 0402 | | | | | 0402 | | | | |
| VOLTAGE (V _{DC}) | | 6.3 | 10 | 16 | 25 | 50 | 6.3 | 10 | 16 | 25 | 50 |
| VOLTAGE CODE | | W | X | Y | Z | A | W | X | Y | Z | A |
| CAP. CODE | CAP. | | | | | | | | | | |
| 101 | 100 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 121 | 120 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 151 | 150 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 181 | 180 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 221 | 220 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 271 | 270 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 331 | 330 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 391 | 390 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 471 | 470 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 561 | 560 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 681 | 680 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 821 | 820 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 102 | 1000 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 122 | 1200 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 152 | 1500 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) |
| 182 | 1800 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | |
| 222 | 2200 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | |
| 272 | 2700 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | |
| 332 | 3300 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | |
| 392 | 3900 | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | • (J, K, M) | |
| 472 | 4700 | • (J, K, M) | • (J, K, M) | • (J, K, M) | | | • (J, K, M) | • (J, K, M) | • (J, K, M) | | |
| 562 | 5600 | • (J, K, M) | • (J, K, M) | • (J, K, M) | | | • (J, K, M) | • (J, K, M) | • (J, K, M) | | |
| 682 | 6800 | • (J, K, M) | • (J, K, M) | • (J, K, M) | | | • (J, K, M) | • (J, K, M) | • (J, K, M) | | |
| 822 | 8200 | • (J, K, M) | • (J, K, M) | • (J, K, M) | | | • (J, K, M) | • (J, K, M) | • (J, K, M) | | |
| 103 | 10 000 | • (J, K, M) | • (J, K, M) | • (J, K, M) | | | | | | | |

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- Not RoHS-compliant



| SELECTION CHART | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DIELECTRIC | | BP | | | | |
| STYLE | | CDR36 | | | | |
| SLASH SHEET | | /12 | | | | |
| CASE CODE | | 0603 | | | | |
| VOLTAGE (V _{DC}) | | 10 | 16 | 25 | 50 | 100 |
| VOLTAGE CODE | | X | Y | Z | A | B |
| CAP. CODE | CAPACITANCE | | | | | |
| 510 | 51 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 560 | 56 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 620 | 62 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 680 | 68 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 750 | 75 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 820 | 82 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 910 | 91 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 101 | 100 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 121 | 120 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 151 | 150 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 181 | 180 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 221 | 220 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 271 | 270 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 331 | 330 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) |
| 391 | 390 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | |
| 471 | 470 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | |
| 561 | 560 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | |
| 681 | 680 | • (F, G, J) | • (F, G, J) | • (F, G, J) | • (F, G, J) | |
| 821 | 820 | • (F, G, J) | • (F, G, J) | • (F, G, J) | | |
| 102 | 1000 | • (F, G, J) | • (F, G, J) | • (F, G, J) | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | | | | | | | | | | | |
|----------------------------|---------|-------|----|----|----|----|-----|-------|----|----|----|----|-----|
| DIELECTRIC | | BR | | | | | | BX | | | | | |
| STYLE | | CDR36 | | | | | | CDR36 | | | | | |
| SLASH SHEET | | /12 | | | | | | /12 | | | | | |
| CASE CODE | | 0603 | | | | | | 0603 | | | | | |
| VOLTAGE (V _{DC}) | | 6.3 | 10 | 16 | 25 | 50 | 100 | 6.3 | 10 | 16 | 25 | 50 | 100 |
| VOLTAGE CODE | | W | X | Y | Z | A | B | W | X | Y | Z | A | B |
| CAP. CODE | CAP. | | | | | | | | | | | | |
| 101 | 100 | • | • | • | • | • | • | • | • | • | • | • | • |
| 121 | 120 | • | • | • | • | • | • | • | • | • | • | • | • |
| 151 | 150 | • | • | • | • | • | • | • | • | • | • | • | • |
| 181 | 180 | • | • | • | • | • | • | • | • | • | • | • | • |
| 221 | 220 | • | • | • | • | • | • | • | • | • | • | • | • |
| 271 | 270 | • | • | • | • | • | • | • | • | • | • | • | • |
| 331 | 330 | • | • | • | • | • | • | • | • | • | • | • | • |
| 391 | 390 | • | • | • | • | • | • | • | • | • | • | • | • |
| 471 | 470 | • | • | • | • | • | • | • | • | • | • | • | • |
| 561 | 560 | • | • | • | • | • | • | • | • | • | • | • | • |
| 681 | 680 | • | • | • | • | • | • | • | • | • | • | • | • |
| 821 | 820 | • | • | • | • | • | • | • | • | • | • | • | • |
| 102 | 1000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 122 | 1200 | • | • | • | • | • | • | • | • | • | • | • | • |
| 152 | 1500 | • | • | • | • | • | • | • | • | • | • | • | • |
| 182 | 1800 | • | • | • | • | • | • | • | • | • | • | • | • |
| 222 | 2200 | • | • | • | • | • | • | • | • | • | • | • | • |
| 272 | 2700 | • | • | • | • | • | • | • | • | • | • | • | • |
| 332 | 3300 | • | • | • | • | • | • | • | • | • | • | • | • |
| 392 | 3900 | • | • | • | • | • | • | • | • | • | • | • | • |
| 472 | 4700 | • | • | • | • | • | • | • | • | • | • | • | • |
| 562 | 5600 | • | • | • | • | • | • | • | • | • | • | • | • |
| 682 | 6800 | • | • | • | • | • | • | • | • | • | • | • | • |
| 822 | 8200 | • | • | • | • | • | • | • | • | • | • | • | • |
| 103 | 10 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 123 | 12 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 153 | 15 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 183 | 18 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 223 | 22 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 273 | 27 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 333 | 33 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 393 | 39 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 473 | 47 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 563 | 56 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 683 | 68 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 823 | 82 000 | • | • | • | • | • | • | • | • | • | • | • | • |
| 104 | 100 000 | • | • | • | • | • | • | • | • | • | • | • | • |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes “W”, “Z”, and “U”
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| SELECTION CHART | | | |
|----------------------------|-------------|----------|-------------|
| DIELECTRIC | | BP | |
| STYLE | | CDR31 | CDR01 |
| SLASH SHEET | | /7 | /1 |
| CASE CODE | | 0805 | 0805 |
| VOLTAGE (V _{DC}) | | 50 | 100 |
| VOLTAGE CODE | | A | B |
| CAP. CODE | CAPACITANCE | | |
| 1R0 | 1 | | • (C) |
| 1R1 | 1.1 | | • (C) |
| 1R2 | 1.2 | | • (C) |
| 1R3 | 1.3 | | • (C) |
| 1R5 | 1.5 | | • (C) |
| 1R6 | 1.6 | | • (C) |
| 1R8 | 1.8 | | • (C) |
| 2R0 | 2 | | • (C) |
| 2R2 | 2.2 | | • (C) |
| 2R4 | 2.4 | | • (C) |
| 2R7 | 2.7 | | • (C, D) |
| 3R0 | 3 | | • (C, D) |
| 3R3 | 3.3 | | • (C, D) |
| 3R6 | 3.6 | | • (C, D) |
| 3R9 | 3.9 | | • (C, D) |
| 4R3 | 4.3 | | • (C, D) |
| 4R7 | 4.7 | | • (C, D) |
| 5R1 | 5.1 | | • (C, D) |
| 5R6 | 5.6 | | • (C, D) |
| 6R2 | 6.2 | | • (C, D) |
| 6R8 | 6.8 | | • (C, D) |
| 7R5 | 7.5 | | • (C, D) |
| 8R2 | 8.2 | | • (C, D) |
| 9R1 | 9.1 | | • (C, D) |
| 100 | 10 | • (J, K) | • (F, J, K) |
| 110 | 11 | | • (F, J, K) |
| 120 | 12 | • (J) | • (F, J, K) |
| 130 | 13 | | • (F, J, K) |
| 150 | 15 | • (J, K) | • (F, J, K) |
| 160 | 16 | | • (F, J, K) |
| 180 | 18 | • (J) | • (F, J, K) |
| 200 | 20 | | • (F, J, K) |
| 220 | 22 | • (J, K) | • (F, J, K) |
| 240 | 24 | | • (F, J, K) |
| 270 | 27 | • (J) | • (F, J, K) |
| 300 | 30 | | • (F, J, K) |
| 330 | 33 | • (J, K) | • (F, J, K) |
| 360 | 36 | | • (F, J, K) |
| 390 | 39 | • (J) | • (F, J, K) |
| 430 | 43 | | • (F, J, K) |
| 470 | 47 | • (J, K) | • (F, J, K) |
| 510 | 51 | | • (F, J, K) |
| 560 | 56 | • (J) | • (F, J, K) |
| 620 | 62 | | • (F, J, K) |
| 680 | 68 | • (J, K) | • (F, J, K) |
| 750 | 75 | | • (F, J, K) |
| 820 | 82 | • (J) | • (F, J, K) |
| 910 | 91 | | • (F, J, K) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | | |
|----------------------------|-------------|-------------|----------|-------------|
| DIELECTRIC | | BP | | |
| STYLE | | CDR31 | CDR01 | CDR31 |
| SLASH SHEET | | /7 | /1 | /7 |
| CASE CODE | | 0805 | 0805 | 0805 |
| VOLTAGE (V _{DC}) | | 50 | 100 | 100 |
| VOLTAGE CODE | | A | B | B |
| CAP. CODE | CAPACITANCE | | | |
| 101 | 100 | | • (J, K) | • (F, J, K) |
| 111 | 110 | | | • (F, J, K) |
| 121 | 120 | | • (J, K) | • (F, J, K) |
| 131 | 130 | | | • (F, J, K) |
| 151 | 150 | | • (J, K) | • (F, J, K) |
| 161 | 160 | | | • (F, J, K) |
| 181 | 180 | | • (J, K) | • (F, J, K) |
| 201 | 200 | | | • (F, J, K) |
| 221 | 220 | | | • (F, J, K) |
| 241 | 240 | | | • (F, J, K) |
| 271 | 270 | | | • (F, J, K) |
| 301 | 300 | | | • (F, J, K) |
| 331 | 330 | | | • (F, J, K) |
| 361 | 360 | | | • (F, J, K) |
| 391 | 390 | | | • (F, J, K) |
| 431 | 430 | | | • (F, J, K) |
| 471 | 470 | | | • (F, J, K) |
| 511 | 510 | • (F, J, K) | | |
| 561 | 560 | • (F, J, K) | | |
| 621 | 620 | • (F, J, K) | | |
| 681 | 680 | • (F, J, K) | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes “W”, “Z”, and “U”
- Not RoHS-compliant

| SELECTION CHART | | | | | |
|----------------------------|-------------|-------|-------|----------|----------|
| DIELECTRIC | | BX | | | |
| STYLE | | CDR01 | CDR31 | CDR01 | CDR31 |
| SLASH SHEET | | /1 | /7 | /1 | /7 |
| CASE CODE | | 0805 | 0805 | 0805 | 0805 |
| VOLTAGE (V _{DC}) | | 50 | 50 | 100 | 100 |
| VOLTAGE CODE | | A | A | B | B |
| CAP. CODE | CAPACITANCE | | | | |
| 121 | 120 | | | • (J, K) | |
| 151 | 150 | | | • (J, K) | |
| 181 | 180 | | | • (J, K) | |
| 221 | 220 | | | • (K, M) | |
| 271 | 270 | | | • (K) | |
| 331 | 330 | | | • (K, M) | |
| 391 | 390 | | | • (K) | |
| 471 | 470 | | | • (K, M) | • (K, M) |
| 561 | 560 | | | • (K) | • (K, M) |
| 681 | 680 | | | • (K, M) | • (K, M) |
| 821 | 820 | | | • (K) | • (K, M) |
| 102 | 1000 | | | • (K, M) | • (K, M) |
| 122 | 1200 | | | • (K) | • (K, M) |
| 152 | 1500 | | | • (K, M) | • (K, M) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes “W”, “Z”, and “U”
- Not RoHS-compliant



| SELECTION CHART | | | | | |
|----------------------------|-------------|----------|----------|----------|----------|
| DIELECTRIC | | BX | | | |
| STYLE | | CDR01 | CDR31 | CDR01 | CDR31 |
| SLASH SHEET | | /1 | /7 | /1 | /7 |
| CASE CODE | | 0805 | 0805 | 0805 | 0805 |
| VOLTAGE (V _{DC}) | | 50 | 50 | 100 | 100 |
| VOLTAGE CODE | | A | A | B | B |
| CAP. CODE | CAPACITANCE | | | | |
| 182 | 1800 | | | • (K) | • (K, M) |
| 222 | 2200 | | | • (K, M) | • (K, M) |
| 272 | 2700 | | | • (K) | • (K, M) |
| 332 | 3300 | | | • (K, M) | • (K, M) |
| 392 | 3900 | • (K) | | | • (K, M) |
| 472 | 4700 | • (K, M) | | | • (K, M) |
| 562 | 5600 | | • (K, M) | | |
| 682 | 6800 | | • (K, M) | | |
| 822 | 8200 | | • (K, M) | | |
| 103 | 10 000 | | • (K, M) | | |
| 123 | 12 000 | | • (K, M) | | |
| 153 | 15 000 | | • (K, M) | | |
| 183 | 18 000 | | • (K, M) | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant

| SELECTION CHART | | | | |
|----------------------------|-------------|-------|-----|----------|
| DIELECTRIC | | BP | | |
| STYLE | | CDR32 | | |
| SLASH SHEET | | /8 | | |
| CASE CODE | | 1206 | | |
| VOLTAGE (V _{DC}) | | 50 | 100 | |
| VOLTAGE CODE | | A | B | |
| CAP. CODE | CAPACITANCE | | | |
| 1R0 | 1 | | | • (C) |
| 1R1 | 1.1 | | | • (C) |
| 1R2 | 1.2 | | | • (C) |
| 1R3 | 1.3 | | | • (C) |
| 1R5 | 1.5 | | | • (C) |
| 1R6 | 1.6 | | | • (C) |
| 1R8 | 1.8 | | | • (C) |
| 2R0 | 2 | | | • (C) |
| 2R2 | 2.2 | | | • (C) |
| 2R4 | 2.4 | | | • (C) |
| 2R7 | 2.7 | | | • (C, D) |
| 3R0 | 3 | | | • (C, D) |
| 3R3 | 3.3 | | | • (C, D) |
| 3R6 | 3.6 | | | • (C, D) |
| 3R9 | 3.9 | | | • (C, D) |
| 4R3 | 4.3 | | | • (C, D) |
| 4R7 | 4.7 | | | • (C, D) |
| 5R1 | 5.1 | | | • (C, D) |
| 5R6 | 5.6 | | | • (C, D) |
| 6R2 | 6.2 | | | • (C, D) |
| 6R8 | 6.8 | | | • (C, D) |
| 7R5 | 7.5 | | | • (C, D) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | |
|---------------------------------|--------------------|----------------------|
| DIELECTRIC | | BP |
| STYLE | | CDR32 |
| SLASH SHEET | | /8 |
| CASE CODE | | 1206 |
| VOLTAGE (V_{DC}) | | 50 100 |
| VOLTAGE CODE | | A B |
| CAP. CODE | CAPACITANCE | |
| 8R2 | 8.2 | • (C, D) |
| 9R1 | 9.1 | • (C, D) |
| 100 | 10 | • (F, J, K) |
| 110 | 11 | • (F, J, K) |
| 120 | 12 | • (F, J, K) |
| 150 | 15 | • (F, J, K) |
| 160 | 16 | • (F, J, K) |
| 180 | 18 | • (F, J, K) |
| 200 | 20 | • (F, J, K) |
| 220 | 22 | • (F, J, K) |
| 240 | 24 | • (F, J, K) |
| 270 | 27 | • (F, J, K) |
| 300 | 30 | • (F, J, K) |
| 330 | 33 | • (F, J, K) |
| 360 | 36 | • (F, J, K) |
| 390 | 39 | • (F, J, K) |
| 430 | 43 | • (F, J, K) |
| 470 | 47 | • (F, J, K) |
| 510 | 51 | • (F, J, K) |
| 560 | 56 | • (F, J, K) |
| 620 | 62 | • (F, J, K) |
| 680 | 68 | • (F, J, K) |
| 750 | 75 | • (F, J, K) |
| 820 | 82 | • (F, J, K) |
| 910 | 91 | • (F, J, K) |
| 101 | 100 | • (F, J, K) |
| 111 | 110 | • (F, J, K) |
| 121 | 120 | • (F, J, K) |
| 131 | 130 | • (F, J, K) |
| 151 | 150 | • (F, J, K) |
| 161 | 160 | • (F, J, K) |
| 181 | 180 | • (F, J, K) |
| 201 | 200 | • (F, J, K) |
| 221 | 220 | • (F, J, K) |
| 241 | 240 | • (F, J, K) |
| 271 | 270 | • (F, J, K) |
| 301 | 300 | • (F, J, K) |
| 331 | 330 | • (F, J, K) |
| 361 | 360 | • (F, J, K) |
| 391 | 390 | • (F, J, K) |
| 431 | 430 | • (F, J, K) |
| 471 | 470 | • (F, J, K) |
| 511 | 510 | • (F, J, K) |
| 561 | 560 | • (F, J, K) |
| 621 | 620 | • (F, J, K) |
| 681 | 680 | • (F, J, K) |
| 751 | 750 | • (F, J, K) |
| 821 | 820 | • (F, J, K) |
| 911 | 910 | • (F, J, K) |
| 102 | 1000 | • (F, J, K) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | |
|----------------------------|-------------|-------------|-----|
| DIELECTRIC | | BP | |
| STYLE | | CDR32 | |
| SLASH SHEET | | /8 | |
| CASE CODE | | 1206 | |
| VOLTAGE (V _{DC}) | | 50 | 100 |
| VOLTAGE CODE | | A | B |
| CAP. CODE | CAPACITANCE | | |
| 112 | 1100 | • (F, J, K) | |
| 122 | 1200 | • (F, J, K) | |
| 132 | 1300 | • (F, J, K) | |
| 152 | 1500 | • (F, J, K) | |
| 162 | 1600 | • (F, J, K) | |
| 182 | 1800 | • (F, J, K) | |
| 202 | 2000 | • (F, J, K) | |
| 222 | 2200 | • (F, J, K) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant

| SELECTION CHART | | | |
|----------------------------|-------------|----------|----------|
| DIELECTRIC | | BX | |
| STYLE | | CDR32 | |
| SLASH SHEET | | /8 | |
| CASE CODE | | 1206 | |
| VOLTAGE (V _{DC}) | | 50 | 100 |
| VOLTAGE CODE | | A | B |
| CAP. CODE | CAPACITANCE | | |
| 472 | 4700 | | • (K, M) |
| 562 | 5600 | | • (K, M) |
| 682 | 6800 | | • (K, M) |
| 822 | 8200 | | • (K, M) |
| 103 | 10 000 | | • (K, M) |
| 123 | 12 000 | | • (K, M) |
| 153 | 15 000 | | • (K, M) |
| 183 | 18 000 | • (K, M) | |
| 223 | 22 000 | • (K, M) | |
| 273 | 27 000 | • (K, M) | |
| 333 | 33 000 | • (K, M) | |
| 393 | 39 000 | • (K, M) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | |
|----------------------------|-------------|-------------|-------------|
| DIELECTRIC | | BP | |
| STYLE | | CDR33 | |
| SLASH SHEET | | /9 | |
| CASE CODE | | 1210 | |
| VOLTAGE (V _{DC}) | | 50 | 100 |
| VOLTAGE CODE | | A | B |
| CAP. CODE | CAPACITANCE | | |
| 102 | 1000 | | • (F, J, K) |
| 112 | 1100 | | • (F, J, K) |
| 122 | 1200 | | • (F, J, K) |
| 132 | 1300 | | • (F, J, K) |
| 152 | 1500 | | • (F, J, K) |
| 162 | 1600 | | • (F, J, K) |
| 182 | 1800 | | • (F, J, K) |
| 202 | 2000 | | • (F, J, K) |
| 222 | 2200 | | • (F, J, K) |
| 242 | 2400 | • (F, J, K) | |
| 272 | 2700 | • (F, J, K) | |
| 302 | 3000 | • (F, J, K) | |
| 332 | 3300 | • (F, J, K) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant

| SELECTION CHART | | | |
|----------------------------|-------------|----------|----------|
| DIELECTRIC | | BX | |
| STYLE | | CDR33 | |
| SLASH SHEET | | /9 | |
| CASE CODE | | 1210 | |
| VOLTAGE (V _{DC}) | | 50 | 100 |
| VOLTAGE CODE | | A | B |
| CAP. CODE | CAPACITANCE | | |
| 153 | 15 000 | | • (K, M) |
| 183 | 18 000 | | • (K, M) |
| 223 | 22 000 | | • (K, M) |
| 273 | 27 000 | | • (K, M) |
| 333 | 33 000 | | |
| 393 | 39 000 | • (K, M) | |
| 473 | 47 000 | • (K, M) | |
| 563 | 56 000 | • (K, M) | |
| 683 | 68 000 | • (K, M) | |
| 823 | 82 000 | • (K, M) | |
| 104 | 100 000 | • (K, M) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | | | | | | |
|----------------------------|-------------|-------------|----------|-------------|----------|----------|----------|----------|
| DIELECTRIC | | BP | | | BX | | | |
| STYLE | | CDR34 | | | CDR04 | | | |
| SLASH SHEET | | /10 | /1 | /10 | /1 | /10 | /1 | /10 |
| CASE CODE | | 1812 | 1812 | 1812 | 1812 | 1812 | 1812 | 1812 |
| VOLTAGE (V _{DC}) | | 50 | 100 | 100 | 50 | 50 | 100 | 100 |
| VOLTAGE CODE | | A | B | B | A | A | B | B |
| CAP. CODE | CAPACITANCE | | | | | | | |
| 122 | 1200 | | • (J) | | | | | |
| 152 | 1500 | | • (J, K) | | | | | |
| 182 | 1800 | | • (J) | | | | | |
| 222 | 2200 | | • (J, K) | • (F, J, K) | | | | |
| 242 | 2400 | | | • (F, J, K) | | | | |
| 272 | 2700 | | • (J) | • (F, J, K) | | | | |
| 302 | 3000 | | | • (F, J, K) | | | | |
| 332 | 3300 | | • (J, K) | • (F, J, K) | | | | |
| 362 | 3600 | | | • (F, J, K) | | | | |
| 392 | 3900 | | | • (F, J, K) | | | | |
| 432 | 4300 | | | • (F, J, K) | | | | |
| 472 | 4700 | | | • (F, J, K) | | | | |
| 512 | 5100 | • (F, J, K) | | | | | | |
| 562 | 5600 | • (F, J, K) | | | | | | |
| 622 | 6200 | • (F, J, K) | | | | | | |
| 682 | 6800 | • (F, J, K) | | | | | | |
| 752 | 7500 | • (F, J, K) | | | | | | |
| 822 | 8200 | • (F, J, K) | | | | | | |
| 912 | 9100 | • (F, J, K) | | | | | | |
| 103 | 10 000 | • (F, J, K) | | | | | | |
| 113 | 11 000 | | | | | | | |
| 123 | 12 000 | | | | | | | |
| 133 | 13 000 | | | | | | | |
| 153 | 15 000 | | | | | | | |
| 163 | 16 000 | | | | | | | |
| 183 | 18 000 | | | | | | | |
| 203 | 20 000 | | | | | | | |
| 223 | 22 000 | | | | | | | |
| 273 | 27 000 | | | | | | | • (K, M) |
| 333 | 33 000 | | | | | | | • (K, M) |
| 393 | 39 000 | | | | | | • (K) | • (K, M) |
| 473 | 47 000 | | | | | | • (K, M) | • (K, M) |
| 563 | 56 000 | | | | | | • (K) | • (K, M) |
| 683 | 68 000 | | | | | | | |
| 823 | 82 000 | | | | • (K) | | | |
| 104 | 100 000 | | | | • (K, M) | • (K, M) | | |
| 124 | 120 000 | | | | • (K) | • (K, M) | | |
| 154 | 150 000 | | | | • (K, M) | • (K, M) | | |
| 184 | 180 000 | | | | • (K) | • (K, M) | | |
| 224 | 220 000 | | | | | | | |
| 274 | 270 000 | | | | | | | |
| 334 | 330 000 | | | | | | | |
| 394 | 390 000 | | | | | | | |
| 474 | 470 000 | | | | | | | |

Notes

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- Not RoHS-compliant



| SELECTION CHART | | | | | |
|----------------------------|-------------|-------------|-------------|----------|----------|
| DIELECTRIC | | BP | | BX | |
| STYLE | | CDR35 | | CDR35 | |
| SLASH SHEET | | /11 | | /11 | |
| CASE CODE | | 1825 | | 1825 | |
| VOLTAGE (V _{DC}) | | 50 | 100 | 50 | 100 |
| VOLTAGE CODE | | A | B | A | B |
| CAP. CODE | CAPACITANCE | | | | |
| 472 | 4700 | | • (F, J, K) | | |
| 512 | 5100 | | • (F, J, K) | | |
| 562 | 5600 | | • (F, J, K) | | |
| 622 | 6200 | | • (F, J, K) | | |
| 682 | 6800 | | • (F, J, K) | | |
| 752 | 7500 | | • (F, J, K) | | |
| 822 | 8200 | | • (F, J, K) | | |
| 912 | 9100 | | • (F, J, K) | | |
| 103 | 10 000 | | • (F, J, K) | | |
| 113 | 11 000 | • (F, J, K) | | | |
| 123 | 12 000 | • (F, J, K) | | | |
| 133 | 13 000 | • (F, J, K) | | | |
| 153 | 15 000 | • (F, J, K) | | | |
| 163 | 16 000 | • (F, J, K) | | | |
| 183 | 18 000 | • (F, J, K) | | | |
| 203 | 20 000 | • (F, J, K) | | | |
| 223 | 22 000 | • (F, J, K) | | | |
| 273 | 27 000 | | | | |
| 333 | 33 000 | | | | |
| 393 | 39 000 | | | | |
| 473 | 47 000 | | | | |
| 563 | 56 000 | | | | • (K, M) |
| 683 | 68 000 | | | | • (K, M) |
| 823 | 82 000 | | | | • (K, M) |
| 104 | 100 000 | | | | • (K, M) |
| 124 | 120 000 | | | | • (K, M) |
| 154 | 150 000 | | | | • (K, M) |
| 184 | 180 000 | | | • (K, M) | |
| 224 | 220 000 | | | • (K, M) | |
| 274 | 270 000 | | | • (K, M) | |
| 334 | 330 000 | | | • (K, M) | |
| 394 | 390 000 | | | • (K, M) | |
| 474 | 470 000 | | | • (K, M) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes "W", "Z", and "U"
- Not RoHS-compliant



| SELECTION CHART | | | | |
|----------------------------|-------------|----------|----------|----------|
| DIELECTRIC | | BP | BX | |
| STYLE | | CDR02 | CDR02 | |
| SLASH SHEET | | /1 | /1 | |
| CASE CODE | | 1805 | 1805 | |
| VOLTAGE (V _{DC}) | | 100 | 50 | 100 |
| VOLTAGE CODE | | B | A | B |
| CAP. CODE | CAPACITANCE | | | |
| 221 | 220 | • (J, K) | | |
| 271 | 270 | • (J) | | |
| 392 | 3900 | | | • (K) |
| 472 | 4700 | | | • (K, M) |
| 562 | 5600 | | | • (K) |
| 682 | 6800 | | | • (K, M) |
| 822 | 8200 | | | • (K) |
| 103 | 10 000 | | | • (K, M) |
| 123 | 12 000 | | • (K) | |
| 153 | 15 000 | | • (K, M) | |
| 183 | 18 000 | | • (K) | |
| 223 | 22 000 | | • (K, M) | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes “W”, “Z”, and “U”
- Not RoHS-compliant

| SELECTION CHART | | | | | |
|----------------------------|-------------|----------|----------|----------|----------|
| DIELECTRIC | | BP | BX | | |
| STYLE | | CDR03 | CDR03 | | CDR06 |
| SLASH SHEET | | /1 | /1 | | /3 |
| CASE CODE | | 1808 | 1808 | | 2225 |
| VOLTAGE (V _{DC}) | | 100 | 50 | 100 | 50 |
| VOLTAGE CODE | | B | A | B | A |
| CAP. CODE | CAPACITANCE | | | | |
| 331 | 330 | • (J, K) | | | |
| 391 | 390 | • (J) | | | |
| 471 | 470 | • (J, K) | | | |
| 561 | 560 | • (J) | | | |
| 681 | 680 | • (J, K) | | | |
| 821 | 820 | • (J) | | | |
| 102 | 1000 | • (J, K) | | | |
| 123 | 12 000 | | | • (K) | |
| 153 | 15 000 | | | • (K, M) | |
| 183 | 18 000 | | | • (K) | |
| 223 | 22 000 | | | • (K, M) | |
| 273 | 27 000 | | | • (K) | |
| 333 | 33 000 | | | • (K, M) | |
| 393 | 39 000 | | • (K) | | |
| 473 | 47 000 | | • (K, M) | | |
| 563 | 56 000 | | • (K) | | |
| 683 | 68 000 | | • (K, M) | | |
| 394 | 390 000 | | | | • (K) |
| 474 | 470 000 | | | | • (K, M) |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing terminations, codes “W”, “Z”, and “U”
- Not RoHS-compliant



| TAPE AND REEL QUANTITIES ⁽¹⁾⁽²⁾⁽³⁾ | | | | | | | | |
|---|-----------|-----------|--------------------|------|------|---------------------------------|--------|------|
| STYLES | BODY SIZE | TAPE SIZE | 7" REEL QUANTITIES | | | 11 1/4" AND 13" REEL QUANTITIES | | BULK |
| | | | PACKAGING CODE | | | PACKAGING CODE | | |
| | | | "C" | "T" | "J" | "P" | "R" | |
| CDR37 | 0402 | 8 mm | 5000 | n/a | 1000 | 10 000 | n/a | 100 |
| CDR36 | 0603 | 8 mm | 4000 | n/a | 1000 | 10 000 | n/a | 100 |
| CDR01, CDR31 | 0805 | 8 mm | 3000 | 3000 | 1000 | 10 000 | 10 000 | 100 |
| CDR32 | 1206 | 8 mm | n/a | 3000 | 1000 | n/a | 10 000 | 100 |
| CDR33 | 1210 | 8 mm | n/a | 3000 | 1000 | n/a | 10 000 | 100 |
| CDR02 | 1805 | 12 mm | n/a | 2000 | 500 | n/a | 10 000 | 100 |
| CDR03 | 1808 | 12 mm | n/a | 2000 | 500 | n/a | 10 000 | 100 |
| CDR04, CDR34 | 1812 | 12 mm | n/a | 1000 | 500 | n/a | 4000 | 100 |
| CDR35 | 1825 | 12 mm | n/a | 1000 | 500 | n/a | 4000 | 100 |
| CDR06 | 2225 | 12 mm | n/a | 500 | 250 | n/a | 4000 | 100 |

Notes

- (1) Vishay Vitramon uses embossed plastic carrier tape and punched paper carrier tape
- (2) Paper tape is not available for case sizes > 1206 or for component thickness > 0.035" (0.89 mm)
- (3) DC voltage rating should not be exceeded in application

| STORAGE AND HANDLING CONDITIONS |
|---|
| <p>(1) Store the components at 5 °C to +40 °C ambient temperature and ≤ 70 % related humidity conditions</p> <p>(2) The product is recommended to be used within a time-frame of 2 years after shipment. Check solderability in case extended shelf life beyond the expiry date is needed</p> <p>Precautions:</p> <ul style="list-style-type: none"> a. Do not store products in an environment containing corrosive elements, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. This may cause corrosion or oxidization of the terminations, which can easily lead to poor soldering b. Store products on the shelf and avoid exposure to moisture or dust c. Do not expose products to excessive shock, vibration, direct sunlight and so on |



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