

Surface Mount Multilayer Ceramic Chip Capacitors for High Frequency



FEATURES

- Case size 0402, 0505, 0603, 0805, 1111, 2525, and 3838
- High frequency
- Ultra-stable, high Q dielectric material
- Non-magnetic copper termination "C"
- Lead (Pb)-free terminations code "X"
- Tin / lead termination code "L"
- Surface mount, wet build process
- Reliable Noble Metal Electrode (NME) system
- Made with a combination of design, materials, and tight process control to achieve very high field reliability
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



Available

RoHS*
Available

HALOGEN
FREE
GREEN
(5-2008)
Available

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

LINKS TO ADDITIONAL RESOURCES



Design Tools



S-Parameters



Simulation Tools



Infographics



Videos



Related Documents

APPLICATIONS

- RF and microwave instruments
- Base stations
- Wireless devices
- Broadband communication
- Medical instrumentation and test
- Military devices (radar, communication, etc.)
- Satellite communication

ELECTRICAL SPECIFICATIONS

Note

- Electrical characteristics at 25 °C unless otherwise specified

Operating Temperature:

-55 °C to +125 °C

Capacitance Range:

0402: 0.1 pF to 82 pF
0505: 0.1 pF to 1.0 nF
0603: 0.1 pF to 470 pF
0805: 0.1 pF to 1.0 nF
1111: 0.2 pF to 3.3 nF
2525: 1.0 pF to 3.0 nF
3838: 1.0 pF to 12 nF

Voltage Rating:

0402: 25 V_{DC} to 200 V_{DC}
0505: 50 V_{DC} to 250 V_{DC}
0603: 25 V_{DC} to 250 V_{DC}
0805: 25 V_{DC} to 500 V_{DC}
1111: 50 V_{DC} to 1500 V_{DC}
2525: 300 V_{DC} to 3600 V_{DC}
3838: 300 V_{DC} to 7200 V_{DC}

Temperature Coefficient of Capacitance (TCC):

C0G (D): 0 ppm/°C ± 30 ppm/°C from -55 °C to +125 °C with zero (0) V_{DC} applied

Dissipation Factor (DF):

C0G (D): 0.05 % max. at 1.0 V_{RMS} and 1 MHz
for values ≤ 1000 pF

C0G (D): 0.05 % max. at 1.0 V_{RMS} and 1 kHz
for values > 1000 pF

Aging Rate: 0 % maximum per decade

Insulation Resistance (IR):

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

at +125 °C and rated voltage 10 000 MΩ minimum or 100 ΩF, whichever is less

Dielectric Strength Test:

performed per method 103 of EIA-198-2-E.

Applied test voltages:

≤ 250 V_{DC}-rated: min. 200 % of rated voltage
> 250 V_{DC}-rated: min. 150 % of rated voltage
1500 V_{DC} and up: 120 % rated voltage



QUICK REFERENCE DATA

| DIELECTRIC | CASE | MAXIMUM VOLTAGE (V) | CAPACITANCE | |
|------------|------|------------------------|-------------|---------|
| | | | MINIMUM | MAXIMUM |
| D = HIFREQ | 0402 | 200 | 0.1 pF | 82 pF |
| | 0505 | 250 | 0.1 pF | 1 nF |
| | 0603 | 250 | 0.1 pF | 470 pF |
| | 0805 | 500 | 0.1 pF | 1.0 nF |
| | 1111 | 1500 | 0.2 pF | 3.3 nF |
| | 2525 | 3600 | 1.0 pF | 3 nF |
| | 3838 | 7200 | 1.0 pF | 12 nF |

ORDERING INFORMATION

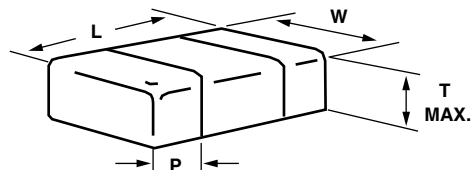
| VJ0603 | D | 101 | J | X | A | A | T |
|--|------------|--|---|--|--|---|---|
| CASE CODE | DIELECTRIC | CAPACITANCE NOMINAL CODE | CAPACITANCE TOLERANCE | TERMINATION | DC VOLTAGE RATING ⁽¹⁾ | MARKING | PACKAGING ⁽⁴⁾ |
| 0402 0505 0603 0805 1111 2525 3838 | D = HIFREQ | Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. An "R" indicates a decimal point. Examples: 1R0 = 1.0 pF | V = ± 0.05 pF B = ± 0.10 pF C = ± 0.25 pF D = ± 0.50 pF F = ± 1 % G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Note Details see "Selection Chart" | X = Ni barrier 100 % tin plate matte finish C = non-magnetic copper barrier 100 % tin plate matte finish E = AgPd ⁽²⁾ L = Ni barrier with tin lead plated finish min. 4 % lead | X = 25 V A = 50 V B = 100 V K = 150 V C = 200 V P = 250 V D = 300 V E = 500 V L = 630 V I = 800 V G = 1000 V R = 1500 V F = 2000 V O = 2500 V H = 3000 V W = 3600 V M = 5000 V S = 7200 V | A = unmarked ⁽³⁾ Q = marked | T = 7" reel / plastic tape C = 7" reel / paper tape O = 7" reel / flamed paper tape J = 7" reel (low quantity) R = 11 1/4" / 13" reel / plastic tape P = 11 1/4" / 13" reel / paper tape I = 11 1/4" / 13" reel / flamed paper tape W = waffle pack Note "I" and "O" is used for "E" termination code |

Notes

- (1) DC voltage rating should not be exceeded in application
 (2) Termination code "E" is for conductive epoxy assembly - only available for EIA case sizes 0402, 0603, and 0805
 (3) Case size 0402 only available with "A"
 (4) See "Standard Packaging Quantities" table

ENVIRONMENTAL STATUS

| TERMINATION CODE | TERMINATION DESCRIPTION | RoHS COMPLIANT | VISHAY GREEN |
|------------------|---|----------------|--------------|
| C | Non-magnetic copper barrier 100 % tin plated matte finish | Yes | Yes |
| X | Ni barrier 100 % tin plated matte finish | Yes | Yes |
| E | AgPd | Yes | Yes |
| L | Ni barrier tin lead plated with min. 4 % lead | No | No |

DIMENSIONS in inches (millimeters)


| CASE CODE | STYLE | LENGTH (L) | WIDTH (W) | MAXIMUM THICKNESS (T) | TERMINATIONS PAD (P) | |
|-----------|--------|---|---|-----------------------|----------------------|--------------------------------|
| | | | | | MINIMUM | MAXIMUM ⁽¹⁾ |
| 0402 | VJ0402 | 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) |
| 0505 | VJ0505 | 0.055 + 0.015 / - 0.010 (1.40 + 0.382 / - 0.254) | 0.055 ± 0.015 (1.40 ± 0.38) | 0.057 (1.45) | 0.004 (0.10) | 0.016 (0.41) |
| 0603 | VJ0603 | 0.063 ± 0.006 (1.60 ± 0.15) | 0.031 ± 0.005 (0.80 ± 0.12) | 0.037 (0.94) | 0.010 (0.25) | 0.022 (0.55) |
| 0805 | VJ0805 | 0.079 ± 0.008 (2.00 ± 0.20) | 0.049 ± 0.008 (1.25 ± 0.20) | 0.057 (1.45) | 0.010 (0.25) | 0.030 (0.76) |
| 1111 | VJ1111 | 0.117 + 0.015 / - 0.010 (2.98 + 0.382 / - 0.254) | 0.110 + 0.015 / - 0.020 (2.79 + 0.382 / - 0.509) | 0.102 (2.59) | 0.012 (0.30) | 0.018 ⁽²⁾ (0.46) |
| 2525 | VJ2525 | 0.250 + 0.020 / - 0.025 (6.35 + 0.508 / - 0.63) | 0.250 ± 0.015 (6.35 ± 0.381) | 0.102 (2.59) | 0.010 (0.25) | 0.030 ⁽³⁾ (0.76) |
| 3838 | VJ3838 | 0.381 ± 0.015 (9.7 ± 0.40) | 0.381 + 0.017 / - 0.015 (9.7 + 0.45 / - 0.40) | 0.118 (3.00) | 0.010 (0.25) | 0.030 ⁽³⁾ (0.76) |

Notes

- (1) For Cu termination "C" add 0.01 mm to maximum pad terminations
(2) For Cu termination "C" case size 1111 add 0.17 mm to maximum pad termination
(3) For Cu termination "C" case sizes 2525 and 3838 maximum pad termination size is 0.041 inches (1.04 mm)



| SELECTION CHART | | | | | | |
|----------------------------|--------|---------|----|-----|-----|------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | |
| STYLE | | VJ0402 | | | | |
| CASE CODE | | 0402 | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | TOLERANCE |
| VOLTAGE CODE | | X | A | B | C | |
| CAP. CODE | CAP. | | | | | |
| 0R1 | 0.1 pF | •• | •• | •• | •• | V, B, C, D |
| 0R2 | 0.2 pF | •• | •• | •• | •• | V, B, C, D |
| 0R3 | 0.3 pF | •• | •• | •• | •• | V, B, C, D |
| 0R4 | 0.4 pF | •• | •• | •• | •• | V, B, C, D |
| 0R5 | 0.5 pF | •• | •• | •• | •• | V, B, C, D |
| 0R6 | 0.6 pF | •• | •• | •• | •• | V, B, C, D |
| 0R7 | 0.7 pF | •• | •• | •• | •• | V, B, C, D |
| 0R8 | 0.8 pF | •• | •• | •• | •• | V, B, C, D |
| 0R9 | 0.9 pF | •• | •• | •• | •• | V, B, C, D |
| 1R0 | 1.0 pF | •• | •• | •• | •• | V, B, C, D |
| 1R1 | 1.1 pF | •• | •• | •• | •• | V, B, C, D |
| 1R2 | 1.2 pF | •• | •• | •• | •• | V, B, C, D |
| 1R3 | 1.3 pF | •• | •• | •• | •• | V, B, C, D |
| 1R4 | 1.4 pF | •• | •• | •• | •• | V, B, C, D |
| 1R5 | 1.5 pF | •• | •• | •• | •• | V, B, C, D |
| 1R6 | 1.6 pF | •• | •• | •• | •• | V, B, C, D |
| 1R7 | 1.7 pF | •• | •• | •• | •• | V, B, C, D |
| 1R8 | 1.8 pF | •• | •• | •• | •• | V, B, C, D |
| 1R9 | 1.9 pF | •• | •• | •• | •• | V, B, C, D |
| 2R0 | 2.0 pF | •• | •• | •• | •• | V, B, C, D |
| 2R1 | 2.1 pF | •• | •• | •• | •• | V, B, C, D |
| 2R2 | 2.2 pF | •• | •• | •• | •• | V, B, C, D |
| 2R4 | 2.4 pF | •• | •• | •• | •• | V, B, C, D |
| 2R7 | 2.7 pF | •• | •• | •• | •• | V, B, C, D |
| 3R0 | 3.0 pF | •• | •• | •• | •• | V, B, C, D |
| 3R3 | 3.3 pF | •• | •• | •• | •• | V, B, C, D |
| 3R6 | 3.6 pF | •• | •• | •• | •• | V, B, C, D |
| 3R9 | 3.9 pF | •• | •• | •• | •• | V, B, C, D |
| 4R3 | 4.3 pF | •• | •• | •• | •• | V, B, C, D |
| 4R7 | 4.7 pF | •• | •• | •• | •• | V, B, C, D |
| 5R1 | 5.1 pF | •• | •• | •• | •• | V, B, C, D |
| 5R6 | 5.6 pF | •• | •• | •• | •• | V, B, C, D |
| 6R2 | 6.2 pF | •• | •• | •• | •• | V, B, C, D |
| 6R8 | 6.8 pF | •• | •• | •• | •• | V, B, C, D |
| 7R5 | 7.5 pF | •• | •• | •• | •• | V, B, C, D |
| 8R2 | 8.2 pF | •• | •• | •• | •• | V, B, C, D |
| 9R1 | 9.1 pF | •• | •• | •• | •• | V, B, C, D |

Notes

•• RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

•• Paper carrier

- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034



| SELECTION CHART | | | | | | |
|----------------------------|--------|---------|----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | |
| STYLE | | VJ0402 | | | | |
| CASE CODE | | 0402 | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | TOLERANCE |
| VOLTAGE CODE | | X | A | B | C | |
| CAP. CODE | CAP. | | | | | |
| 100 | 10 pF | •• | •• | •• | •• | F, G, J, K, M |
| 110 | 11 pF | •• | •• | •• | •• | F, G, J, K, M |
| 120 | 12 pF | •• | •• | •• | •• | F, G, J, K, M |
| 130 | 13 pF | •• | •• | •• | •• | F, G, J, K, M |
| 150 | 15 pF | •• | •• | •• | •• | F, G, J, K, M |
| 180 | 18 pF | •• | •• | •• | •• | F, G, J, K, M |
| 200 | 20 pF | •• | •• | •• | •• | F, G, J, K, M |
| 220 | 22 pF | •• | •• | •• | •• | F, G, J, K, M |
| 240 | 24 pF | •• | •• | •• | •• | F, G, J, K, M |
| 270 | 27 pF | •• | •• | •• | •• | F, G, J, K, M |
| 300 | 30 pF | •• | •• | | | F, G, J, K, M |
| 330 | 33 pF | •• | •• | | | F, G, J, K, M |
| 360 | 36 pF | •• | •• | | | F, G, J, K, M |
| 390 | 39 pF | •• | •• | | | F, G, J, K, M |
| 430 | 43 pF | •• | •• | | | F, G, J, K, M |
| 470 | 47 pF | •• | •• | | | F, G, J, K, M |
| 510 | 51 pF | •• | •• | | | F, G, J, K, M |
| 560 | 56 pF | •• | •• | | | F, G, J, K, M |
| 620 | 62 pF | •• | | | | F, G, J, K, M |
| 680 | 68 pF | •• | | | | F, G, J, K, M |
| 750 | 75 pF | •• | | | | F, G, J, K, M |
| 820 | 82 pF | •• | | | | F, G, J, K, M |
| 910 | 91 pF | | | | | |
| 101 | 100 pF | | | | | |
| 111 | 110 pF | | | | | |
| 121 | 120 pF | | | | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Paper carrier
- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc245034



| SELECTION CHART | | | | | | | |
|----------------------------|--------|---------|-----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | |
| STYLE | | VJ0505 | | | | | |
| CASE CODE | | 0505 | | | | | |
| VOLTAGE (V _{DC}) | | 50 | 100 | 150 | 200 | 250 | TOLERANCE |
| VOLTAGE CODE | | A | B | K | C | P | |
| CAP. CODE | CAP. | | | | | | |
| 0R1 | 0.1 pF | • | • | • | • | • | V, B, C, D |
| 0R2 | 0.2 pF | • | • | • | • | • | V, B, C, D |
| 0R3 | 0.3 pF | • | • | • | • | • | V, B, C, D |
| 0R4 | 0.4 pF | • | • | • | • | • | V, B, C, D |
| 0R5 | 0.5 pF | • | • | • | • | • | V, B, C, D |
| 0R6 | 0.6 pF | • | • | • | • | • | V, B, C, D |
| 0R7 | 0.7 pF | • | • | • | • | • | V, B, C, D |
| 0R8 | 0.8 pF | • | • | • | • | • | V, B, C, D |
| 0R9 | 0.9 pF | • | • | • | • | • | V, B, C, D |
| 1R0 | 1.0 pF | • | • | • | • | • | V, B, C, D |
| 1R1 | 1.1 pF | • | • | • | • | • | V, B, C, D |
| 1R2 | 1.2 pF | • | • | • | • | • | V, B, C, D |
| 1R3 | 1.3 pF | • | • | • | • | • | V, B, C, D |
| 1R4 | 1.4 pF | • | • | • | • | • | V, B, C, D |
| 1R5 | 1.5 pF | • | • | • | • | • | V, B, C, D |
| 1R6 | 1.6 pF | • | • | • | • | • | V, B, C, D |
| 1R7 | 1.7 pF | • | • | • | • | • | V, B, C, D |
| 1R8 | 1.8 pF | • | • | • | • | • | V, B, C, D |
| 1R9 | 1.9 pF | • | • | • | • | • | V, B, C, D |
| 2R0 | 2.0 pF | • | • | • | • | • | V, B, C, D |
| 2R1 | 2.1 pF | • | • | • | • | • | V, B, C, D |
| 2R2 | 2.2 pF | • | • | • | • | • | V, B, C, D |
| 2R4 | 2.4 pF | • | • | • | • | • | V, B, C, D |
| 2R7 | 2.7 pF | • | • | • | • | • | V, B, C, D |
| 3R0 | 3.0 pF | • | • | • | • | • | V, B, C, D |
| 3R3 | 3.3 pF | • | • | • | • | • | V, B, C, D |
| 3R6 | 3.6 pF | • | • | • | • | • | V, B, C, D |
| 3R9 | 3.9 pF | • | • | • | • | • | V, B, C, D |
| 4R3 | 4.3 pF | • | • | • | • | • | V, B, C, D |
| 4R7 | 4.7 pF | • | • | • | • | • | V, B, C, D |
| 5R1 | 5.1 pF | • | • | • | • | • | V, B, C, D |
| 5R6 | 5.6 pF | • | • | • | • | • | B, C, D |
| 6R2 | 6.2 pF | • | • | • | • | • | B, C, D |
| 6R8 | 6.8 pF | • | • | • | • | • | B, C, D |
| 7R5 | 7.5 pF | • | • | • | • | • | B, C, D |
| 8R2 | 8.2 pF | • | • | • | • | • | B, C, D |
| 9R1 | 9.1 pF | • | • | • | • | • | B, C, D |
| 100 | 10 pF | • | • | • | • | • | F, G, J, K, M |
| 110 | 11 pF | • | • | • | • | • | F, G, J, K, M |
| 120 | 12 pF | • | • | • | • | • | F, G, J, K, M |
| 130 | 13 pF | • | • | • | • | • | F, G, J, K, M |
| 150 | 15 pF | • | • | • | • | • | F, G, J, K, M |
| 160 | 16 pF | • | • | • | • | • | F, G, J, K, M |
| 180 | 18 pF | • | • | • | • | • | F, G, J, K, M |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Plastic carrier tape
- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034



| SELECTION CHART | | | | | | | |
|----------------------------|---------|---------|-----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | |
| STYLE | | VJ0505 | | | | | |
| CASE CODE | | 0505 | | | | | |
| VOLTAGE (V _{DC}) | | 50 | 100 | 150 | 200 | 250 | TOLERANCE |
| VOLTAGE CODE | | A | B | K | C | P | |
| CAP. CODE | CAP. | | | | | | |
| 200 | 20 pF | • | • | • | • | • | F, G, J, K, M |
| 220 | 22 pF | • | • | • | • | • | F, G, J, K, M |
| 240 | 24 pF | • | • | • | • | • | F, G, J, K, M |
| 270 | 27 pF | • | • | • | • | • | F, G, J, K, M |
| 300 | 30 pF | • | • | • | • | • | F, G, J, K, M |
| 330 | 33 pF | • | • | • | • | • | F, G, J, K, M |
| 360 | 36 pF | • | • | • | • | • | F, G, J, K, M |
| 390 | 39 pF | • | • | • | • | • | F, G, J, K, M |
| 430 | 43 pF | • | • | • | • | • | F, G, J, K, M |
| 470 | 47 pF | • | • | • | • | • | F, G, J, K, M |
| 510 | 51 pF | • | • | • | • | • | F, G, J, K, M |
| 560 | 56 pF | • | • | • | • | • | F, G, J, K, M |
| 620 | 62 pF | • | • | • | • | • | F, G, J, K, M |
| 680 | 68 pF | • | • | • | • | • | F, G, J, K, M |
| 750 | 75 pF | • | • | • | • | | F, G, J, K, M |
| 820 | 82 pF | • | • | • | • | | F, G, J, K, M |
| 910 | 91 pF | • | • | • | • | | F, G, J, K, M |
| 101 | 100 pF | • | • | • | • | | F, G, J, K, M |
| 111 | 110 pF | • | • | • | • | | F, G, J, K, M |
| 121 | 120 pF | • | • | • | • | | F, G, J, K, M |
| 131 | 130 pF | • | • | • | • | | F, G, J, K, M |
| 151 | 150 pF | • | • | • | • | | F, G, J, K, M |
| 161 | 160 pF | • | • | • | • | | F, G, J, K, M |
| 181 | 180 pF | • | • | • | • | | F, G, J, K, M |
| 201 | 200 pF | • | • | • | • | | F, G, J, K, M |
| 221 | 220 pF | • | • | • | • | | F, G, J, K, M |
| 241 | 240 pF | • | • | • | • | | F, G, J, K, M |
| 271 | 270 pF | • | • | • | | | F, G, J, K, M |
| 301 | 300 pF | • | • | • | | | F, G, J, K, M |
| 331 | 330 pF | • | • | • | | | F, G, J, K, M |
| 361 | 360 pF | • | • | • | | | F, G, J, K, M |
| 391 | 390 pF | • | • | • | | | F, G, J, K, M |
| 431 | 430 pF | • | • | • | | | F, G, J, K, M |
| 471 | 470 pF | • | • | • | | | F, G, J, K, M |
| 511 | 510 pF | • | | | | | F, G, J, K, M |
| 561 | 560 pF | • | | | | | F, G, J, K, M |
| 621 | 620 pF | • | | | | | F, G, J, K, M |
| 681 | 680 pF | • | | | | | F, G, J, K, M |
| 751 | 750 pF | • | | | | | F, G, J, K, M |
| 821 | 820 pF | • | | | | | F, G, J, K, M |
| 911 | 910 pF | • | | | | | F, G, J, K, M |
| 102 | 1000 pF | • | | | | | F, G, J, K, M |
| 112 | 1100 pF | | | | | | |
| 122 | 1200 pF | | | | | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Plastic carrier tape
- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034



| SELECTION CHART | | | | | | | |
|----------------------------|--------|---------|----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | |
| STYLE | | VJ0603 | | | | | |
| CASE CODE | | 0603 | | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | 250 | TOLERANCE |
| VOLTAGE CODE | | X | A | B | C | P | |
| CAP. CODE | CAP. | | | | | | |
| 0R1 | 0.1 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R2 | 0.2 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R3 | 0.3 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R4 | 0.4 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R5 | 0.5 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R6 | 0.6 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R7 | 0.7 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R8 | 0.8 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 0R9 | 0.9 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R0 | 1.0 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R1 | 1.1 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R2 | 1.2 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R3 | 1.3 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R4 | 1.4 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R5 | 1.5 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R6 | 1.6 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R7 | 1.7 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R8 | 1.8 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 1R9 | 1.9 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 2R0 | 2.0 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 2R1 | 2.1 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 2R2 | 2.2 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 2R4 | 2.4 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 2R7 | 2.7 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 3R0 | 3.0 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 3R3 | 3.3 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 3R6 | 3.6 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 3R9 | 3.9 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 4R3 | 4.3 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 4R7 | 4.7 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 5R1 | 5.1 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 5R6 | 5.6 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 6R2 | 6.2 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 6R8 | 6.8 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 7R5 | 7.5 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 8R2 | 8.2 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 9R1 | 9.1 pF | •• | •• | •• | •• | •• | V, B, C, D |
| 100 | 10 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 110 | 11 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 120 | 12 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 130 | 13 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 150 | 15 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 180 | 18 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 200 | 20 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 220 | 22 pF | •• | •• | •• | •• | •• | F, G, J, K, M |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Paper carrier • Plastic carrier tape
- For case size 0603: Cu termination "C" is only available in plastic carrier tape
- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034



| SELECTION CHART | | | | | | | |
|----------------------------|--------|---------|----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | |
| STYLE | | VJ0603 | | | | | |
| CASE CODE | | 0603 | | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | 250 | TOLERANCE |
| VOLTAGE CODE | | X | A | B | C | P | |
| CAP. CODE | CAP. | | | | | | |
| 240 | 24 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 270 | 27 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 300 | 30 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 330 | 33 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 360 | 36 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 390 | 39 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 430 | 43 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 470 | 47 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 510 | 51 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 560 | 56 pF | •• | •• | •• | •• | •• | F, G, J, K, M |
| 620 | 62 pF | • | • | • | • | • | F, G, J, K, M |
| 680 | 68 pF | • | • | • | • | • | F, G, J, K, M |
| 750 | 75 pF | • | • | • | • | • | F, G, J, K, M |
| 820 | 82 pF | • | • | • | • | • | F, G, J, K, M |
| 910 | 91 pF | • | • | • | • | • | F, G, J, K, M |
| 101 | 100 pF | • | • | • | • | • | F, G, J, K, M |
| 111 | 110 pF | • | • | • | | | F, G, J, K, M |
| 121 | 120 pF | • | • | • | | | F, G, J, K, M |
| 131 | 130 pF | • | • | • | | | F, G, J, K, M |
| 151 | 150 pF | • | • | • | | | F, G, J, K, M |
| 181 | 180 pF | • | • | | | | F, G, J, K, M |
| 201 | 200 pF | • | • | | | | F, G, J, K, M |
| 221 | 220 pF | • | • | | | | F, G, J, K, M |
| 241 | 240 pF | • | • | | | | F, G, J, K, M |
| 271 | 270 pF | • | • | | | | F, G, J, K, M |
| 301 | 300 pF | • | • | | | | F, G, J, K, M |
| 331 | 330 pF | • | • | | | | F, G, J, K, M |
| 361 | 360 pF | • | | | | | F, G, J, K, M |
| 391 | 390 pF | • | | | | | F, G, J, K, M |
| 431 | 430 pF | • | | | | | F, G, J, K, M |
| 471 | 470 pF | • | | | | | F, G, J, K, M |
| 511 | 510 pF | | | | | | |
| 561 | 560 pF | | | | | | |
| 621 | 620 pF | | | | | | |
| 681 | 680 pF | | | | | | |
| 751 | 750 pF | | | | | | |
| 821 | 820 pF | | | | | | |
| 911 | 910 pF | | | | | | |
| 102 | 1.0 nF | | | | | | |
| 112 | 1.1 nF | | | | | | |
| 122 | 1.2 nF | | | | | | |
| 132 | 1.3 nF | | | | | | |
| 152 | 1.5 nF | | | | | | |
| 182 | 1.8 nF | | | | | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Paper carrier • Plastic carrier tape
- For case size 0603: Cu termination "C" is only available in plastic carrier tape
- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034



| SELECTION CHART | | | | | | | | |
|----------------------------|--------|---------|----|-----|-----|-----|-----|------------------|
| DIELECTRIC (VISHAY CODE) | | COG (D) | | | | | | |
| STYLE | | VJ0805 | | | | | | |
| CASE CODE | | 0805 | | | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | 250 | 500 | TOLERANCE (1) |
| VOLTAGE CODE | | X | A | B | C | P | E | |
| CAP. CODE | CAP. | | | | | | | |
| 0R1 | 0.1 pF | • | • | • | • | • | | V, B, C, D |
| 0R2 | 0.2 pF | • | • | • | • | • | | V, B, C, D |
| 0R3 | 0.3 pF | • | • | • | • | • | | V, B, C, D |
| 0R4 | 0.4 pF | • | • | • | • | • | | V, B, C, D |
| 0R5 | 0.5 pF | • | • | • | • | • | | V, B, C, D |
| 0R6 | 0.6 pF | • | • | • | • | • | | V, B, C, D |
| 0R7 | 0.7 pF | • | • | • | • | • | | V, B, C, D |
| 0R8 | 0.8 pF | • | • | • | • | • | | V, B, C, D |
| 0R9 | 0.9 pF | • | • | • | • | • | | V, B, C, D |
| 1R0 | 1.0 pF | • | • | • | • | • | • | V, B, C, D |
| 1R1 | 1.1 pF | • | • | • | • | • | | V, B, C, D |
| 1R2 | 1.2 pF | • | • | • | • | • | • | V, B, C, D |
| 1R3 | 1.3 pF | • | • | • | • | • | | V, B, C, D |
| 1R4 | 1.4 pF | • | • | • | • | • | | V, B, C, D |
| 1R5 | 1.5 pF | • | • | • | • | • | • | V, B, C, D |
| 1R6 | 1.6 pF | • | • | • | • | • | | V, B, C, D |
| 1R7 | 1.7 pF | • | • | • | • | • | | V, B, C, D |
| 1R8 | 1.8 pF | • | • | • | • | • | • | V, B, C, D |
| 1R9 | 1.9 pF | • | • | • | • | • | | V, B, C, D |
| 2R0 | 2.0 pF | • | • | • | • | • | | V, B, C, D |
| 2R1 | 2.1 pF | • | • | • | • | • | | V, B, C, D |
| 2R2 | 2.2 pF | • | • | • | • | • | • | V, B, C, D |
| 2R4 | 2.4 pF | • | • | • | • | • | | V, B, C, D |
| 2R7 | 2.7 pF | • | • | • | • | • | | V, B, C, D |
| 3R0 | 3.0 pF | • | • | • | • | • | | V, B, C, D |
| 3R3 | 3.3 pF | • | • | • | • | • | • | V, B, C, D |
| 3R6 | 3.6 pF | • | • | • | • | • | | V, B, C, D |
| 3R9 | 3.9 pF | • | • | • | • | • | • | V, B, C, D |
| 4R3 | 4.3 pF | • | • | • | • | • | | V, B, C, D |
| 4R7 | 4.7 pF | • | • | • | • | • | • | V, B, C, D |
| 5R1 | 5.1 pF | • | • | • | • | • | | V, B, C, D |
| 5R6 | 5.6 pF | • | • | • | • | • | • | V, B, C, D |
| 6R2 | 6.2 pF | • | • | • | • | • | | V, B, C, D |
| 6R8 | 6.8 pF | • | • | • | • | • | • | V, B, C, D |
| 7R5 | 7.5 pF | • | • | • | • | • | | V, B, C, D |
| 8R2 | 8.2 pF | • | • | • | • | • | • | V, B, C, D |
| 9R1 | 9.1 pF | • | • | • | • | • | | V, B, C, D |

Notes

RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

- Plastic carrier tape

- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034

(1) 500 V, < 10 pF tolerances B, C, D only



| SELECTION CHART | | | | | | | |
|----------------------------|--------|---------|----|-----|-----|-----|-----|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | |
| STYLE | | VJ0805 | | | | | |
| CASE CODE | | 0805 | | | | | |
| VOLTAGE (V _{DC}) | | 25 | 50 | 100 | 200 | 250 | 500 |
| VOLTAGE CODE | | X | A | B | C | P | E |
| CAP. CODE | CAP. | | | | | | |
| 100 | 10 pF | • | • | • | • | • | • |
| 110 | 11 pF | • | • | • | • | • | • |
| 120 | 12 pF | • | • | • | • | • | • |
| 130 | 13 pF | • | • | • | • | • | • |
| 150 | 15 pF | • | • | • | • | • | • |
| 180 | 18 pF | • | • | • | • | • | • |
| 200 | 20 pF | • | • | • | • | • | • |
| 220 | 22 pF | • | • | • | • | • | • |
| 240 | 24 pF | • | • | • | • | • | • |
| 270 | 27 pF | • | • | • | • | • | • |
| 300 | 30 pF | • | • | • | • | • | • |
| 330 | 33 pF | • | • | • | • | • | • |
| 360 | 36 pF | • | • | • | • | • | • |
| 390 | 39 pF | • | • | • | • | • | • |
| 430 | 43 pF | • | • | • | • | • | • |
| 470 | 47 pF | • | • | • | • | • | • |
| 510 | 51 pF | • | • | • | • | • | • |
| 560 | 56 pF | • | • | • | • | • | • |
| 620 | 62 pF | • | • | • | • | • | • |
| 680 | 68 pF | • | • | • | • | • | • |
| 750 | 75 pF | • | • | • | • | • | • |
| 820 | 82 pF | • | • | • | • | • | • |
| 910 | 91 pF | • | • | • | • | • | • |
| 101 | 100 pF | • | • | • | • | • | • |
| 111 | 110 pF | • | • | • | • | • | • |
| 121 | 120 pF | • | • | • | • | • | • |
| 131 | 130 pF | • | • | • | • | • | • |
| 151 | 150 pF | • | • | • | • | • | • |
| 181 | 180 pF | • | • | • | • | • | • |
| 201 | 200 pF | • | • | • | • | • | • |
| 221 | 220 pF | • | • | • | • | • | • |
| 241 | 240 pF | • | • | • | • | • | • |
| 271 | 270 pF | • | • | • | • | • | • |
| 301 | 300 pF | • | • | • | • | • | • |
| 331 | 330 pF | • | • | • | • | • | • |
| 361 | 360 pF | • | • | • | • | • | • |
| 391 | 390 pF | • | • | • | • | • | • |
| 431 | 430 pF | • | • | • | • | • | • |
| 471 | 470 pF | • | • | • | • | • | • |
| 511 | 510 pF | • | • | • | • | • | • |
| 561 | 560 pF | • | • | • | • | • | • |
| 621 | 620 pF | • | • | • | • | • | • |
| 681 | 680 pF | • | • | • | • | • | • |
| 751 | 750 pF | • | • | • | • | • | • |
| 821 | 820 pF | • | • | • | • | • | • |
| 911 | 910 pF | • | • | • | • | • | • |
| 102 | 1.0 nF | • | • | • | • | • | • |

Notes

RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

• Plastic carrier tape

- For soldering conditions see Vishay Soldering Recommendations www.vishay.com/doc?45034

(1) 500 V, < 10 pF tolerances B, C, D only



| SELECTION CHART | | | | | | | | | | |
|----------------------------|--------|---------|-----|-----|-----|-----|-----|------|------|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | | | |
| STYLE | | VJ1111 | | | | | | | | |
| CASE CODE | | 1111 | | | | | | | | |
| VOLTAGE (V _{DC}) | | 50 | 100 | 200 | 300 | 500 | 630 | 1000 | 1500 | TOLERANCE |
| VOLTAGE CODE | | A | B | C | D | E | L | G | R | |
| CAP. CODE | CAP. | | | | | | | | | |
| 0R2 | 0.2 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R3 | 0.3 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R4 | 0.4 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R5 | 0.5 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R6 | 0.6 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R7 | 0.7 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R8 | 0.8 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 0R9 | 0.9 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R0 | 1.0 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R1 | 1.1 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R2 | 1.2 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R3 | 1.3 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R4 | 1.4 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R5 | 1.5 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R6 | 1.6 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R7 | 1.7 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R8 | 1.8 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 1R9 | 1.9 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 2R0 | 2.0 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 2R1 | 2.1 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 2R2 | 2.2 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 2R4 | 2.4 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 2R7 | 2.7 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 3R0 | 3.0 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 3R3 | 3.3 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 3R6 | 3.6 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 3R9 | 3.9 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 4R3 | 4.3 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 4R7 | 4.7 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 5R1 | 5.1 pF | • | • | • | • | • | • | • | • | V, B, C, D |
| 5R6 | 5.6 pF | • | • | • | • | • | • | • | • | B, C, D |
| 6R2 | 6.2 pF | • | • | • | • | • | • | • | • | B, C, D |
| 6R8 | 6.8 pF | • | • | • | • | • | • | • | • | B, C, D |
| 7R5 | 7.5 pF | • | • | • | • | • | • | • | • | B, C, D |
| 8R2 | 8.2 pF | • | • | • | • | • | • | • | • | B, C, D |
| 9R1 | 9.1 pF | • | • | • | • | • | • | • | • | B, C, D |
| 100 | 10 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 110 | 11 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 120 | 12 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 130 | 13 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 150 | 15 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 160 | 16 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 180 | 18 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 200 | 20 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 220 | 22 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 240 | 24 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 270 | 27 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 300 | 30 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 330 | 33 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 360 | 36 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 390 | 39 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 430 | 43 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 470 | 47 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |

Notes

• RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

- Plastic carrier tape



| SELECTION CHART | | | | | | | | | | |
|----------------------------|---------|---------|-----|-----|-----|-----|-----|------|------|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | | | |
| STYLE | | VJ1111 | | | | | | | | |
| CASE CODE | | 1111 | | | | | | | | |
| VOLTAGE (V _{DC}) | | 50 | 100 | 200 | 300 | 500 | 630 | 1000 | 1500 | TOLERANCE |
| VOLTAGE CODE | | A | B | C | D | E | L | G | R | |
| CAP. CODE | CAP. | | | | | | | | | |
| 510 | 51 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 560 | 56 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 620 | 62 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 680 | 68 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 750 | 75 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 820 | 82 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 910 | 91 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 101 | 100 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 111 | 110 pF | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 121 | 120 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 131 | 130 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 151 | 150 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 161 | 160 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 181 | 180 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 201 | 200 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 221 | 220 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 241 | 240 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 271 | 270 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 301 | 300 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 331 | 330 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 361 | 360 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 391 | 390 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 431 | 430 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 471 | 470 pF | • | • | • | • | • | • | • | | F, G, J, K, M |
| 511 | 510 pF | • | • | • | • | | | | | F, G, J, K, M |
| 561 | 560 pF | • | • | • | • | | | | | F, G, J, K, M |
| 621 | 620 pF | • | • | • | • | | | | | F, G, J, K, M |
| 681 | 680 pF | • | • | • | • | | | | | F, G, J, K, M |
| 751 | 750 pF | • | • | • | • | | | | | F, G, J, K, M |
| 821 | 820 pF | • | • | • | • | | | | | F, G, J, K, M |
| 911 | 910 pF | • | • | • | • | | | | | F, G, J, K, M |
| 102 | 1000 pF | • | • | • | • | | | | | F, G, J, K, M |
| 112 | 1100 pF | • | • | • | | | | | | F, G, J, K, M |
| 122 | 1200 pF | • | • | • | | | | | | F, G, J, K, M |
| 132 | 1300 pF | • | • | • | | | | | | F, G, J, K, M |
| 152 | 1500 pF | • | • | • | | | | | | F, G, J, K, M |
| 162 | 1600 pF | • | • | • | | | | | | F, G, J, K, M |
| 182 | 1800 pF | • | • | | | | | | | F, G, J, K, M |
| 202 | 2000 pF | • | • | | | | | | | F, G, J, K, M |
| 222 | 2200 pF | • | • | | | | | | | F, G, J, K, M |
| 242 | 2400 pF | • | • | | | | | | | F, G, J, K, M |
| 272 | 2700 pF | • | • | | | | | | | F, G, J, K, M |
| 302 | 3000 pF | • | • | | | | | | | F, G, J, K, M |
| 332 | 3300 pF | • | • | | | | | | | F, G, J, K, M |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Plastic carrier tape



| SELECTION CHART | | | | | | | | | | | | |
|----------------------------|--------|---------|-----|-----|-----|------|------|------|------|------|------|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | | | | | |
| STYLE | | VJ2525 | | | | | | | | | | |
| CASE CODE | | 2525 | | | | | | | | | | |
| VOLTAGE (V _{DC}) | | 300 | 500 | 630 | 800 | 1000 | 1500 | 2000 | 2500 | 3000 | 3600 | TOLERANCE |
| VOLTAGE CODE | | D | E | L | I | G | R | F | O | H | W | |
| CAP. CODE | CAP. | | | | | | | | | | | |
| 1R0 | 1.0 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R1 | 1.1 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R2 | 1.2 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R3 | 1.3 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R4 | 1.4 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R5 | 1.5 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R6 | 1.6 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R7 | 1.7 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R8 | 1.8 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 1R9 | 1.9 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 2R0 | 2.0 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 2R1 | 2.1 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 2R2 | 2.2 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 2R4 | 2.4 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 2R7 | 2.7 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 3R0 | 3.0 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 3R3 | 3.3 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 3R6 | 3.6 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 3R9 | 3.9 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 4R3 | 4.3 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 4R7 | 4.7 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 5R1 | 5.1 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 5R6 | 5.6 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 6R2 | 6.2 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 6R8 | 6.8 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 7R5 | 7.5 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 8R2 | 8.2 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 9R1 | 9.1 pF | • | • | • | • | • | • | • | • | • | • | B, C, D |
| 100 | 10 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 110 | 11 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 120 | 12 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 130 | 13 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 150 | 15 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 160 | 16 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 180 | 18 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 200 | 20 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 220 | 22 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 240 | 24 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 270 | 27 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 300 | 30 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 330 | 33 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 360 | 36 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 390 | 39 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |

Notes

• RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

• Plastic carrier tape



| SELECTION CHART | | | | | | | | | | | | |
|----------------------------|---------|---------|-----|-----|-----|------|------|------|------|------|------|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | | | | | |
| STYLE | | VJ2525 | | | | | | | | | | |
| CASE CODE | | 2525 | | | | | | | | | | |
| VOLTAGE (V _{DC}) | | 300 | 500 | 630 | 800 | 1000 | 1500 | 2000 | 2500 | 3000 | 3600 | TOLERANCE |
| VOLTAGE CODE | | D | E | L | I | G | R | F | O | H | W | |
| CAP. CODE | CAP. | | | | | | | | | | | |
| 430 | 43 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 470 | 47 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 510 | 51 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 560 | 56 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 620 | 62 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 680 | 68 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 750 | 75 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 820 | 82 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 910 | 91 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 101 | 100 pF | • | • | • | • | • | • | • | • | • | • | F, G, J, K, M |
| 111 | 110 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 121 | 120 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 131 | 130 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 151 | 150 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 161 | 160 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 181 | 180 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 201 | 200 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 221 | 220 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 241 | 240 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 271 | 270 pF | • | • | • | • | • | • | • | • | • | | F, G, J, K, M |
| 301 | 300 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 331 | 330 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 361 | 360 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 391 | 390 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 431 | 430 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 471 | 470 pF | • | • | • | • | • | • | • | | | | F, G, J, K, M |
| 511 | 510 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 561 | 560 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 621 | 620 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 681 | 680 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 751 | 750 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 821 | 820 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 911 | 910 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 102 | 1000 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 112 | 1100 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 122 | 1200 pF | • | • | • | • | • | • | | | | | F, G, J, K, M |
| 152 | 1500 pF | • | • | • | • | | | | | | | F, G, J, K, M |
| 182 | 1800 pF | • | • | • | • | | | | | | | F, G, J, K, M |
| 222 | 2000 pF | • | • | • | • | | | | | | | F, G, J, K, M |
| 242 | 2400 pF | • | • | • | | | | | | | | F, G, J, K, M |
| 272 | 2700 pF | • | • | | | | | | | | | F, G, J, K, M |
| 302 | 3000 pF | • | • | | | | | | | | | F, G, J, K, M |

Notes

• RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"

- Plastic carrier tape



| SELECTION CHART | | | | | | | | | |
|----------------------------|--------|---------|-----|------|------|------|------|------|---------------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | | |
| STYLE | | VJ3838 | | | | | | | |
| CASE CODE | | 3838 | | | | | | | |
| VOLTAGE (V _{DC}) | | 300 | 500 | 1000 | 2500 | 3600 | 5000 | 7200 | TOLERANCE |
| VOLTAGE CODE | | D | E | G | O | W | M | S | |
| CAP. CODE | CAP. | | | | | | | | |
| 1R0 | 1.0 pF | • | • | • | • | • | • | • | B, C, D |
| 1R1 | 1.1 pF | • | • | • | • | • | • | • | B, C, D |
| 1R2 | 1.2 pF | • | • | • | • | • | • | • | B, C, D |
| 1R3 | 1.3 pF | • | • | • | • | • | • | • | B, C, D |
| 1R4 | 1.4 pF | • | • | • | • | • | • | • | B, C, D |
| 1R5 | 1.5 pF | • | • | • | • | • | • | • | B, C, D |
| 1R6 | 1.6 pF | • | • | • | • | • | • | • | B, C, D |
| 1R7 | 1.7 pF | • | • | • | • | • | • | • | B, C, D |
| 1R8 | 1.8 pF | • | • | • | • | • | • | • | B, C, D |
| 1R9 | 1.9 pF | • | • | • | • | • | • | • | B, C, D |
| 2R0 | 2.0 pF | • | • | • | • | • | • | • | B, C, D |
| 2R1 | 2.1 pF | • | • | • | • | • | • | • | B, C, D |
| 2R2 | 2.2 pF | • | • | • | • | • | • | • | B, C, D |
| 2R4 | 2.4 pF | • | • | • | • | • | • | • | B, C, D |
| 2R7 | 2.7 pF | • | • | • | • | • | • | • | B, C, D |
| 3R0 | 3.0 pF | • | • | • | • | • | • | • | B, C, D |
| 3R3 | 3.3 pF | • | • | • | • | • | • | • | B, C, D |
| 3R6 | 3.6 pF | • | • | • | • | • | • | • | B, C, D |
| 3R9 | 3.9 pF | • | • | • | • | • | • | • | B, C, D |
| 4R3 | 4.3 pF | • | • | • | • | • | • | • | B, C, D |
| 4R7 | 4.7 pF | • | • | • | • | • | • | • | B, C, D |
| 5R1 | 5.1 pF | • | • | • | • | • | • | • | B, C, D |
| 5R6 | 5.6 pF | • | • | • | • | • | • | • | B, C, D |
| 6R2 | 6.2 pF | • | • | • | • | • | • | • | B, C, D |
| 6R8 | 6.8 pF | • | • | • | • | • | • | • | B, C, D |
| 7R5 | 7.5 pF | • | • | • | • | • | • | • | B, C, D |
| 8R2 | 8.2 pF | • | • | • | • | • | • | • | B, C, D |
| 9R1 | 9.1 pF | • | • | • | • | • | • | • | B, C, D |
| 100 | 10 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 110 | 11 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 120 | 12 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 130 | 13 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 150 | 15 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 160 | 16 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 180 | 18 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 200 | 20 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 220 | 22 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 240 | 24 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 270 | 27 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 300 | 30 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 330 | 33 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 360 | 36 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 390 | 39 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 430 | 43 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 470 | 47 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 510 | 51 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 560 | 56 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 620 | 62 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 680 | 68 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 750 | 75 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 820 | 82 pF | • | • | • | • | • | • | • | F, G, J, K, M |
| 910 | 91 pF | • | • | • | • | • | • | • | F, G, J, K, M |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Plastic carrier tape



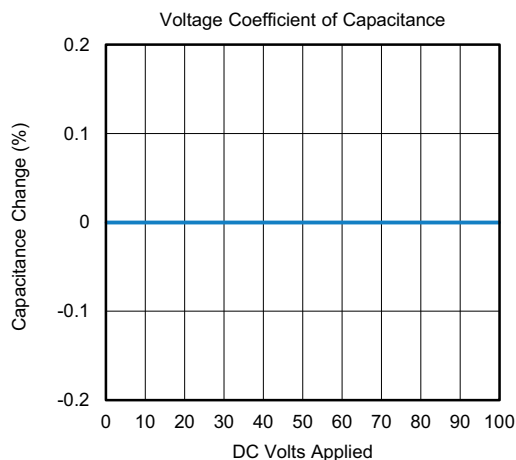
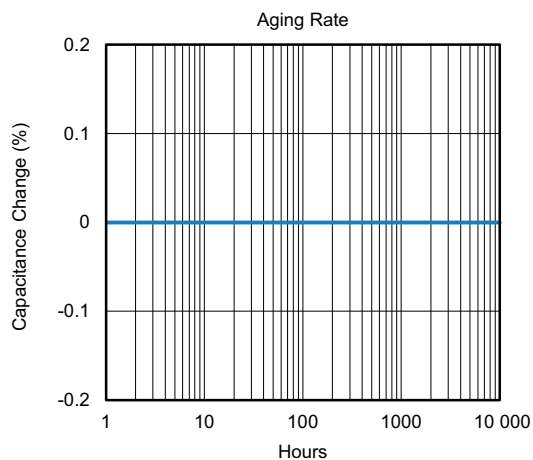
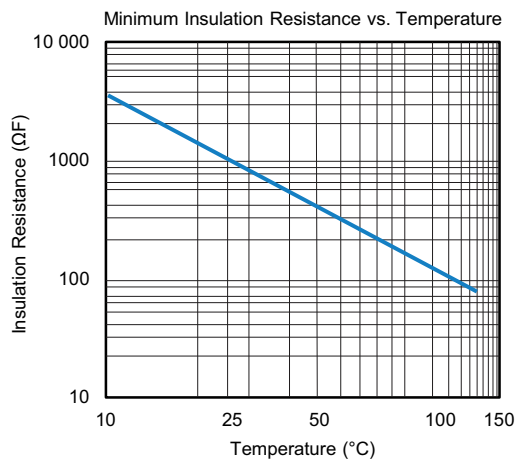
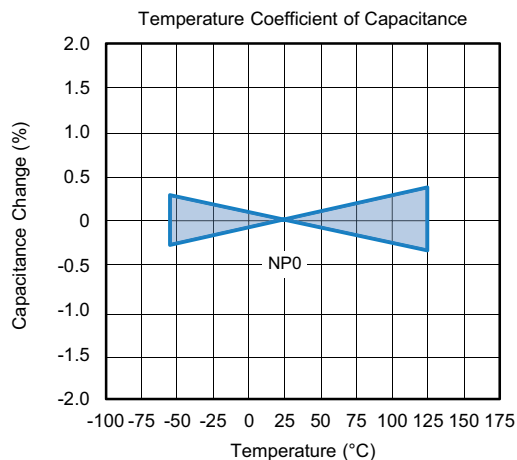
| SELECTION CHART | | | | | | | | |
|----------------------------|-----------|---------|-----|------|------|------|------|------|
| DIELECTRIC (VISHAY CODE) | | C0G (D) | | | | | | |
| STYLE | | VJ3838 | | | | | | |
| CASE CODE | | 3838 | | | | | | |
| VOLTAGE (V _{DC}) | | 300 | 500 | 1000 | 2500 | 3600 | 5000 | 7200 |
| VOLTAGE CODE | | D | E | G | O | W | M | S |
| CAP. CODE | CAP. | | | | | | | |
| 101 | 100 pF | • | • | • | • | • | • | • |
| 111 | 110 pF | • | • | • | • | • | • | |
| 121 | 120 pF | • | • | • | • | • | • | |
| 131 | 130 pF | • | • | • | • | • | • | |
| 151 | 150 pF | • | • | • | • | • | • | |
| 161 | 160 pF | • | • | • | • | • | • | |
| 181 | 180 pF | • | • | • | • | • | • | |
| 201 | 200 pF | • | • | • | • | • | | |
| 221 | 220 pF | • | • | • | • | • | | |
| 241 | 240 pF | • | • | • | • | • | | |
| 271 | 270 pF | • | • | • | • | • | | |
| 301 | 300 pF | • | • | • | • | • | | |
| 331 | 330 pF | • | • | • | • | • | | |
| 361 | 360 pF | • | • | • | • | • | | |
| 391 | 390 pF | • | • | • | • | • | | |
| 431 | 430 pF | • | • | • | • | | | |
| 471 | 470 pF | • | • | • | • | | | |
| 511 | 510 pF | • | • | • | • | | | |
| 561 | 560 pF | • | • | • | • | | | |
| 621 | 620 pF | • | • | • | • | | | |
| 681 | 680 pF | • | • | • | • | | | |
| 751 | 750 pF | • | • | • | • | | | |
| 821 | 820 pF | • | • | • | | | | |
| 911 | 910 pF | • | • | • | | | | |
| 102 | 1000 pF | • | • | • | | | | |
| 112 | 1100 pF | • | • | • | | | | |
| 122 | 1200 pF | • | • | • | | | | |
| 152 | 1500 pF | • | • | • | | | | |
| 182 | 1800 pF | • | • | • | | | | |
| 222 | 2000 pF | • | • | • | | | | |
| 242 | 2400 pF | • | • | • | | | | |
| 272 | 2700 pF | • | • | • | | | | |
| 302 | 3000 pF | • | • | • | | | | |
| 332 | 3300 pF | • | • | • | | | | |
| 362 | 3600 pF | • | • | • | | | | |
| 392 | 3900 pF | • | • | • | | | | |
| 432 | 4300 pF | • | • | • | | | | |
| 472 | 4700 pF | • | • | • | | | | |
| 512 | 5100 pF | • | • | • | | | | |
| 562 | 5600 pF | • | • | | | | | |
| 622 | 6200 pF | • | • | | | | | |
| 682 | 6800 pF | • | • | | | | | |
| 752 | 7500 pF | • | • | | | | | |
| 822 | 8200 pF | • | | | | | | |
| 912 | 9100 pF | • | | | | | | |
| 103 | 10 000 pF | • | | | | | | |
| 113 | 11 000 pF | • | | | | | | |
| 123 | 12 000 pF | • | | | | | | |

Notes

- RoHS-compliant except when supplied with lead (Pb)-containing termination, code "L"
- Plastic carrier tape

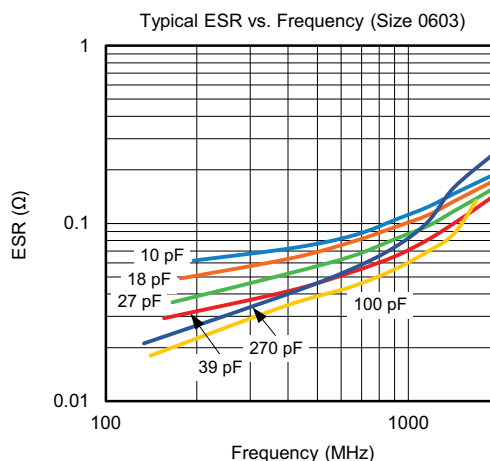
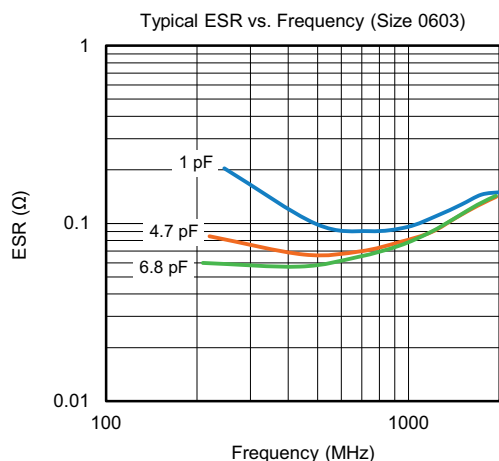
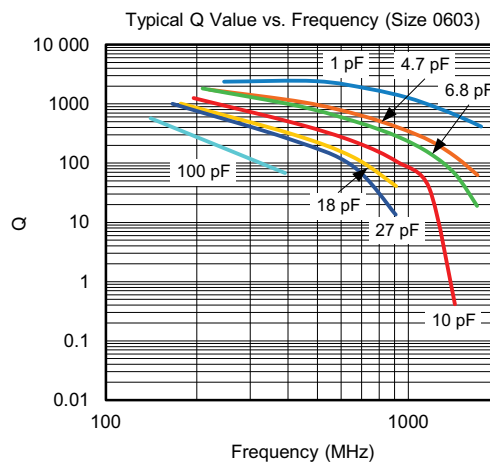
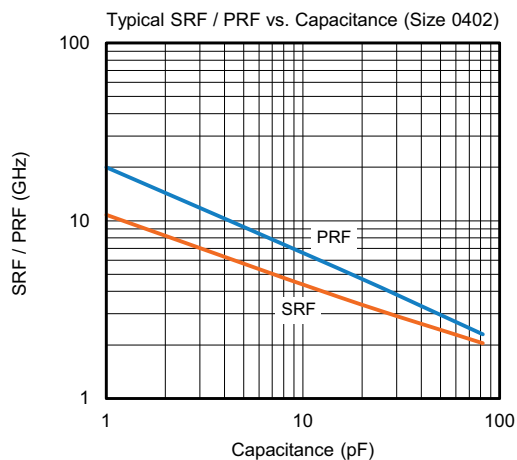
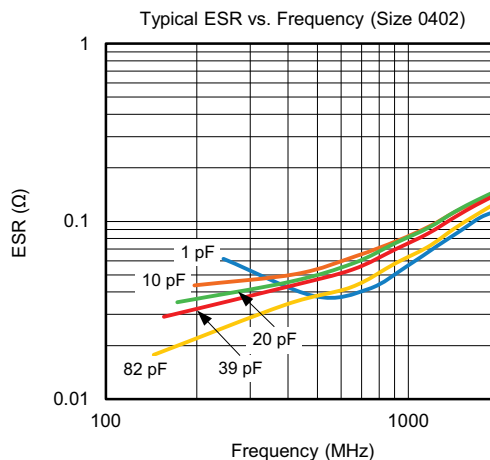
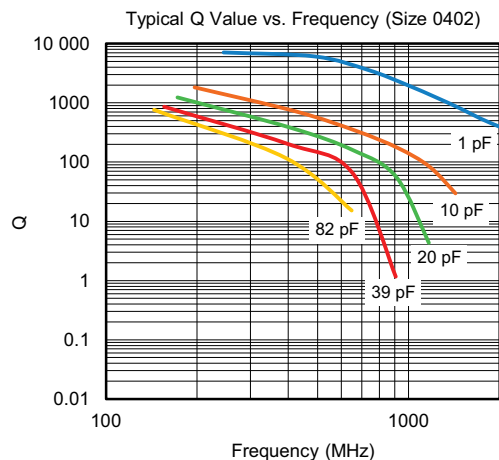


EIA SIZE / QUAD SIZE - TYPICAL PARAMETERS



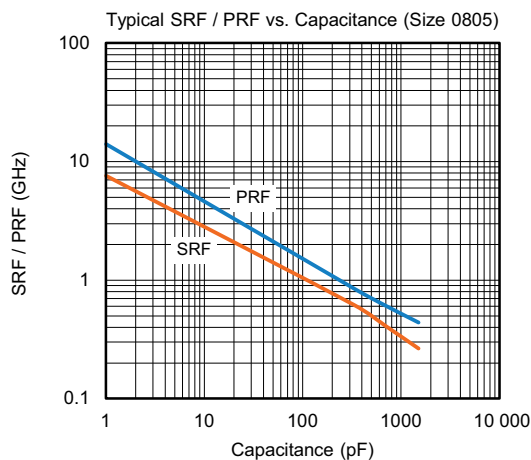
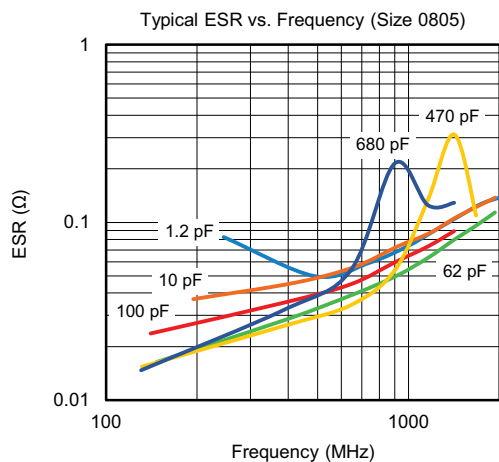
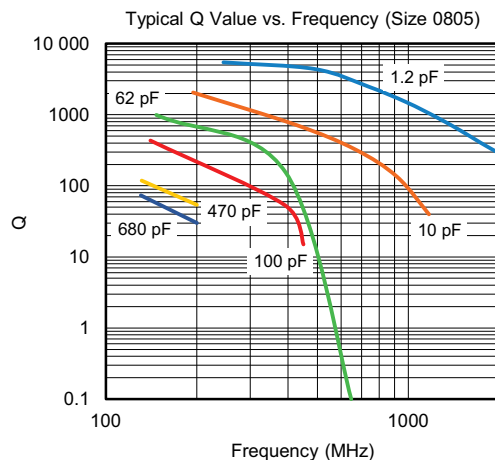
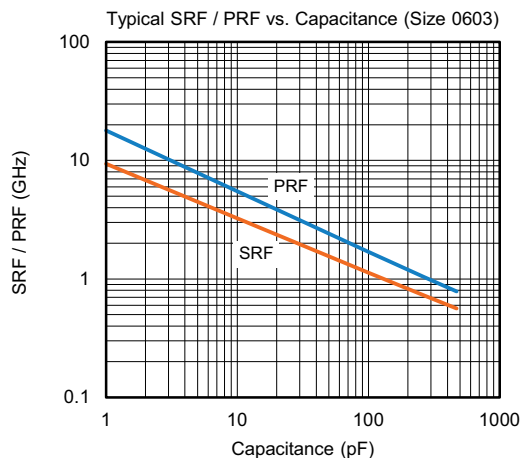


EIA SIZE DIELECTRIC - TYPICAL PARAMETERS

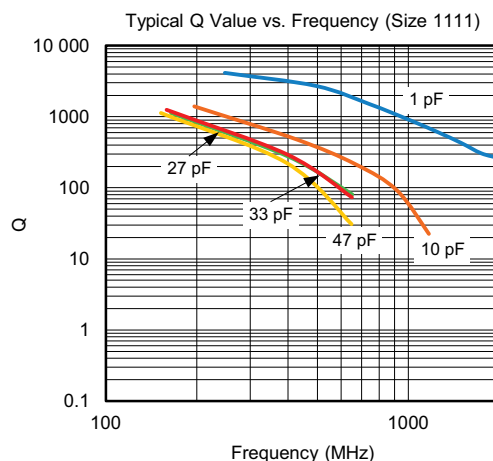
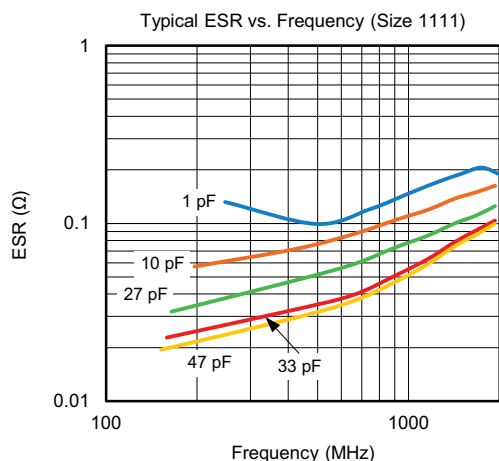
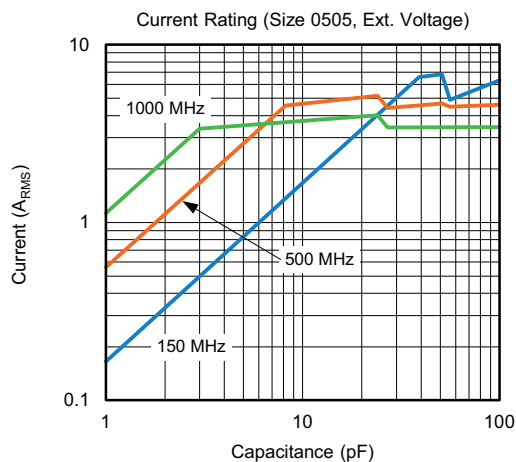
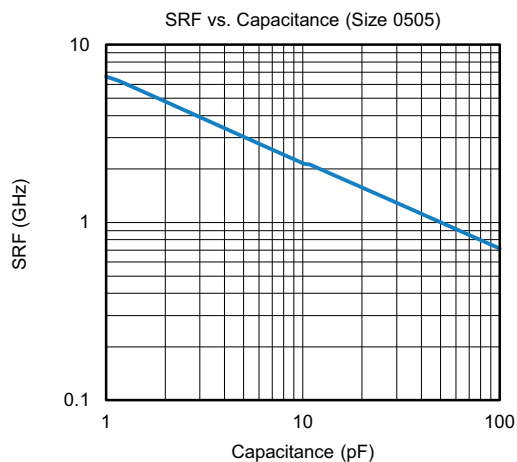
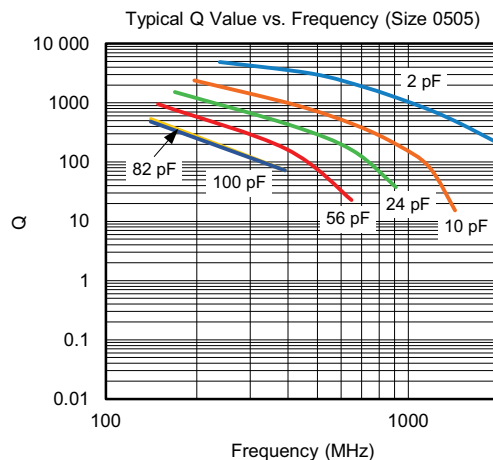
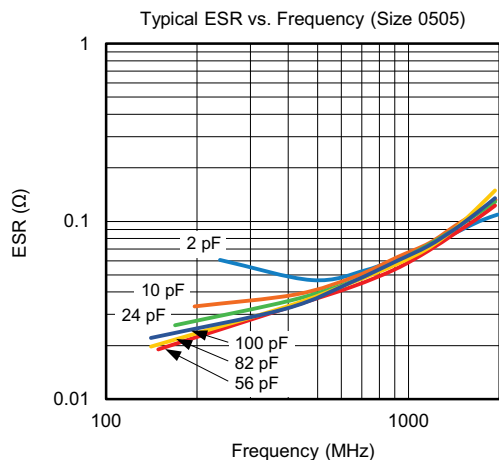




EIA SIZE DIELECTRIC - TYPICAL PARAMETERS

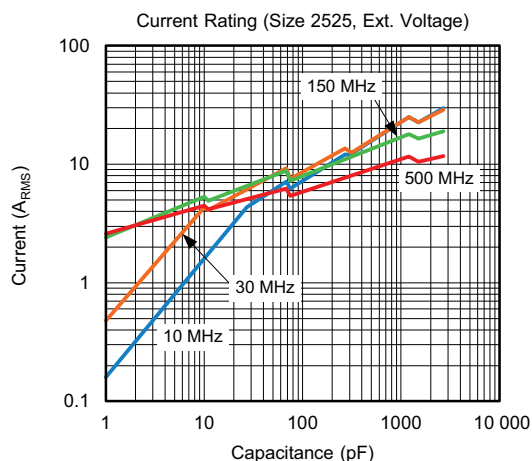
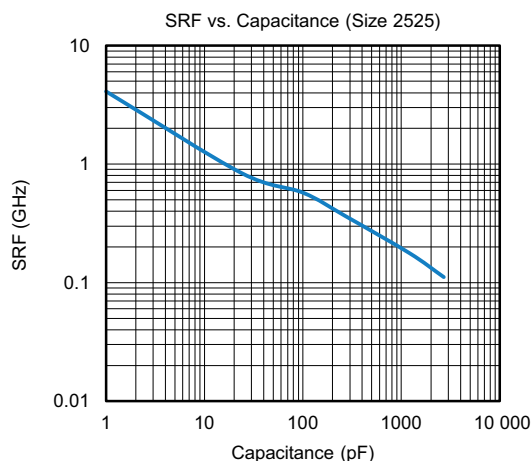
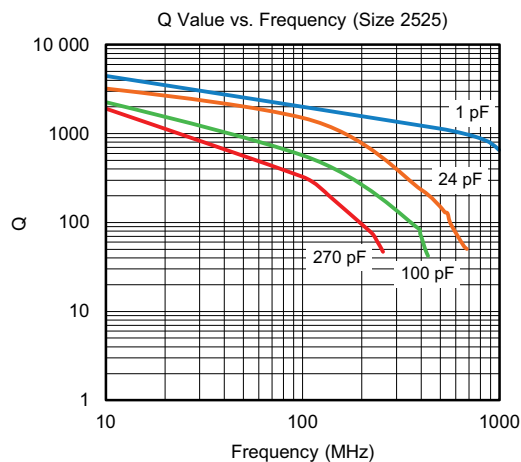
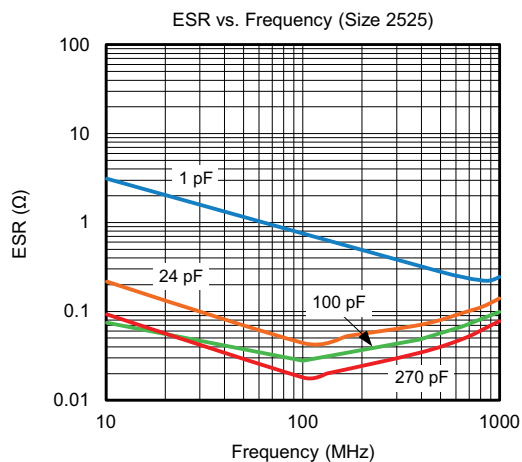
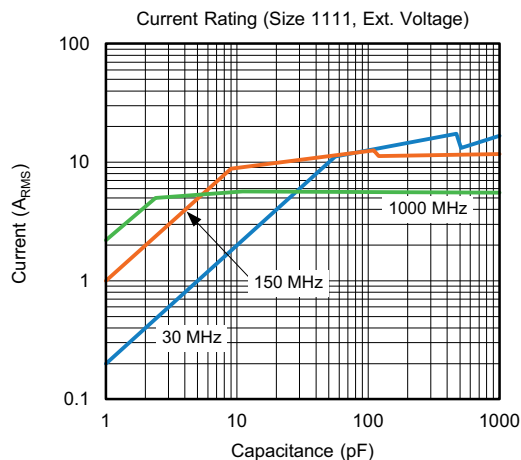
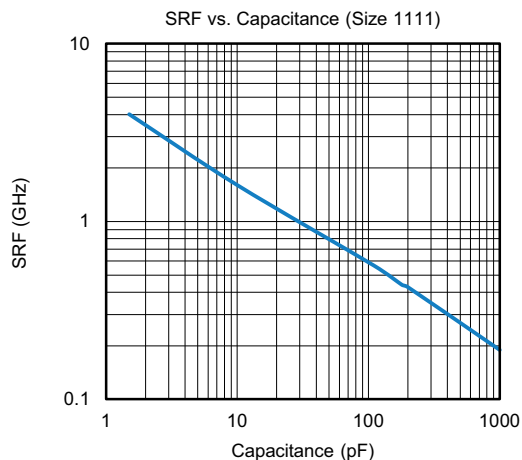


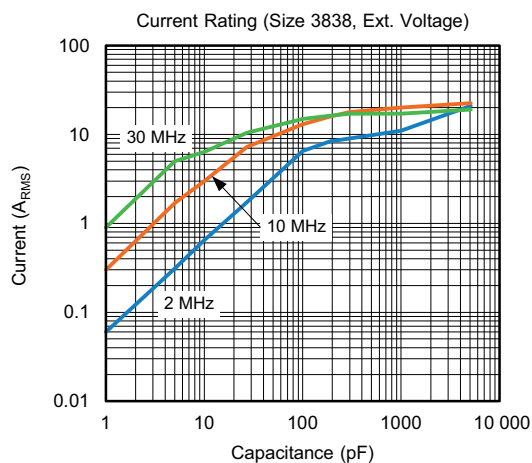
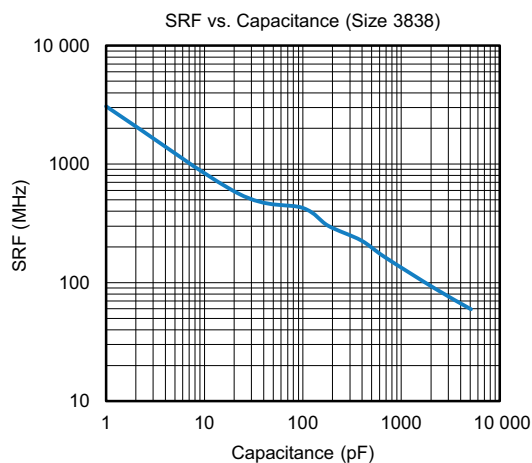
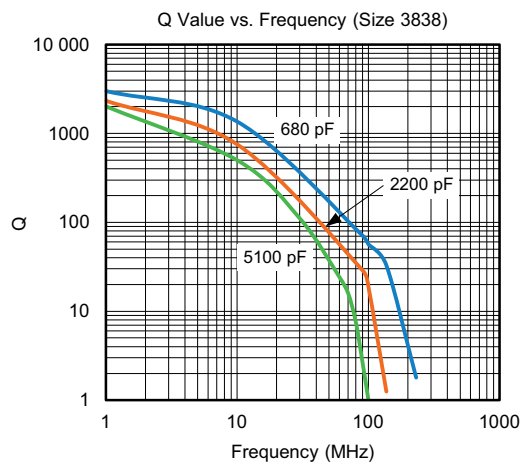
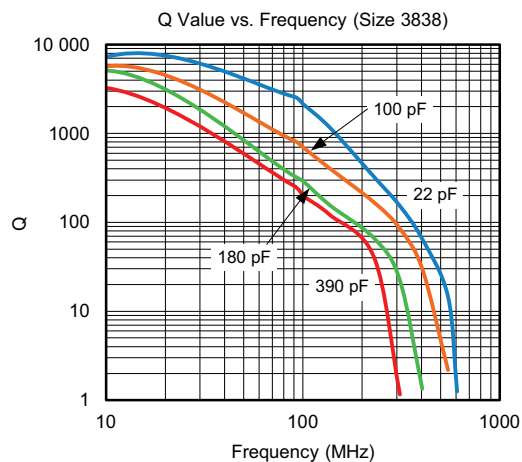
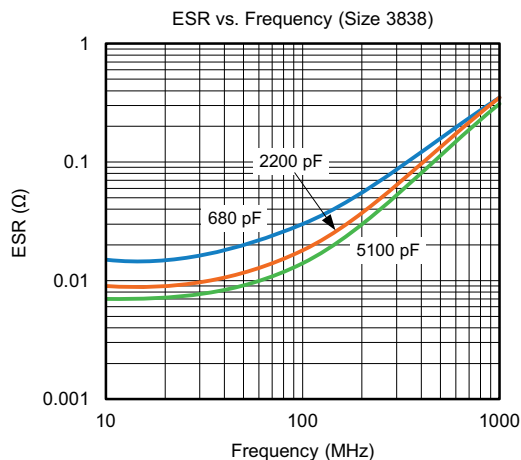
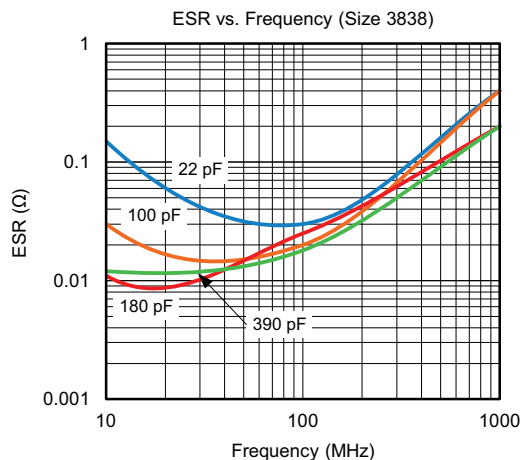
QUAD SIZE DIELECTRIC - TYPICAL PARAMETERS





QUAD SIZE DIELECTRIC - TYPICAL PARAMETERS



QUAD SIZE DIELECTRIC - TYPICAL PARAMETERS


**STANDARD PACKAGING QUANTITIES (1)(2)(3)**

| CASE CODE | TAPE SIZE | 7" REEL QUANTITIES | | | 11 1/4" AND 13" REEL QUANTITIES | | WAFFLE PACK |
|-----------|-----------|-------------------------------------|---------------------------------|----------------------|-------------------------------------|---------------------------------|--|
| | | PAPER TAPE PACKAGING CODE "C" / "O" | PLASTIC TAPE PACKAGING CODE "T" | LOW QUANTITY "J" (5) | PAPER TAPE PACKAGING CODE "P" / "I" | PLASTIC TAPE PACKAGING CODE "R" | PLASTIC WAFFLE PACK PACKAGING CODE "W" |
| 0402 | 8 mm | 5000 | n/a | 1000 | 10 000 | n/a | n/a |
| 0603 (4) | 8 mm | 4000 | 4000 | 1000 | 10 000 | 10 000 | n/a |
| 0805 (4) | 8 mm | n/a | 3000 | 1000 | n/a | 10 000 | n/a |
| 0505 | 8 mm | n/a | 3000 | 1000 | n/a | 10 000 | n/a |
| 1111 | 8 mm | n/a | 2500 | 1000 | n/a | 9000 | n/a |
| 2525 | 12 mm | n/a | 800 | 500 | n/a | n/a | 81 |
| 3838 | 16 mm | n/a | 400 | 100 | n/a | n/a | 35 |

Notes

- (1) Vishay Vitramon uses embossed plastic carrier tape
(2) Reference: EIA standard RS 481 - "Taping of Surface Mount Components for Automatic Placement"
(3) n/a = not available
(4) Packaging "C" / "P" / "O" / "I" and "T" / "R" or lower quantities can depend from product thickness
(5) Paper / plastic tape used by availability

STORAGE AND HANDLING CONDITIONS

- (1) Store the components at 5 °C to +40 °C ambient temperature and ≤ 70 % relative humidity conditions.
(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.

Precautions:

- 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.
- Store products on the shelf and avoid exposure to moisture or dust.
- Do not expose products to excessive shock, vibration, direct sunlight and so on.



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