

## Surface Mount Multilayer Ceramic Capacitors for RF Power Applications



### FEATURES

- Case size 0505, 1111, 2525, and 3838
- Ultra-stable, high Q dielectric material
- Lead (Pb)-free terminations code "X"
- Tin / lead termination code "L"
- Non-magnetic copper termination code "C"
- Reliable Noble Metal Electrode (NME) system
- High frequency
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://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

### APPLICATIONS

- MRI coils and generators
- RF instruments
- Lasers, CATV, UHF / microwave RF power amplifiers
- Filter networks, timing circuits
- Mixers, oscillators impedance matching networks

### ELECTRICAL SPECIFICATIONS

#### Note

- Electrical characteristics at 25 °C unless otherwise specified

#### Operating Temperature:

full range: -55 °C to +125 °C

#### Capacitance Range:

0505: 0.1 pF to 1000 pF

1111: 0.2 pF to 5100 pF

2525: 1.0 pF to 3000 pF

3838: 1.0 pF to 12 nF

#### Voltage Rating:

0505: 50 V<sub>DC</sub> to 250 V<sub>DC</sub>

1111: 50 V<sub>DC</sub> to 1500 V<sub>DC</sub>

2525: 300 V<sub>DC</sub> to 3600 V<sub>DC</sub>

3838: 300 V<sub>DC</sub> to 7200 V<sub>DC</sub>

#### Temperature Coefficient of Capacitance (TCC):

C0G (D): 0 ppm/°C ± 30 ppm/°C from -55 °C to +125 °C with zero (0) V<sub>DC</sub> applied

#### Dissipation Factor (DF):

C0G (D): 0.05 % max. at 1.0 V<sub>RMS</sub> and 1 MHz  
for values ≤ 1000 pF

C0G (D): 0.05 % max. at 1.0 V<sub>RMS</sub> 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<sub>DC</sub>-rated: min. 250 % of rated voltage

300 V<sub>DC</sub>-rated: min. 150 % of rated voltage

630 V<sub>DC</sub>- to 1000 V<sub>DC</sub>-rated: 150 % of rated voltage

1500 V<sub>DC</sub> and up: 120 % rated voltage

**QUICK REFERENCE DATA**

| DIELECTRIC | CASE | MAXIMUM VOLTAGE<br>(V) | CAPACITANCE |         |
|------------|------|------------------------|-------------|---------|
|            |      |                        | MINIMUM     | MAXIMUM |
| D = NP0    | 0505 | 250                    | 0.1 pF      | 1000 pF |
|            | 1111 | 1500                   | 0.2 pF      | 5100 pF |
|            | 2525 | 3600                   | 1.0 pF      | 3000 pF |
|            | 3838 | 7200                   | 1.0 pF      | 12 nF   |

**Note**

- For values below 0.4 pF and tolerance  $\pm 0.05$  pF, contact [mlccrf@vishay.com](mailto:mlccrf@vishay.com)  
Detail ratings see "Selection Chart"

**ORDERING INFORMATION**

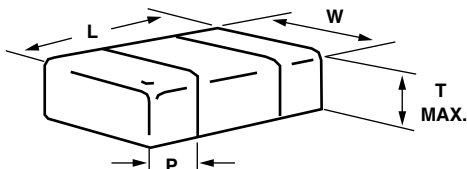
| VJ0505                       | D          | 1R0                                                                                                                                                                 | B                                                                                                                                                                                                                           | X                                                                                                                                                                                | C                                                                                                                                                                                                                                | A                          | C                                                                                                                    |
|------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------|
| CASE CODE                    | DIELECTRIC | CAPACITANCE NOMINAL CODE                                                                                                                                            | CAPACITANCE TOLERANCE                                                                                                                                                                                                       | TERMINATION                                                                                                                                                                      | DC VOLTAGE RATING <sup>(1)</sup>                                                                                                                                                                                                 | MARKING                    | PACKAGING                                                                                                            |
| 0505<br>1111<br>2525<br>3838 | D = HIFREQ | Expressed in picofarads (pF).<br>The first two digits are significant, the third is a multiplier.<br>An "R" indicates a decimal point.<br>Examples:<br>1R0 = 1.0 pF | V = $\pm 0.05$ pF<br>B = $\pm 0.10$ pF<br>C = $\pm 0.25$ pF<br>D = $\pm 0.50$ pF<br>F = $\pm 1$ %<br>G = $\pm 2$ %<br>J = $\pm 5$ %<br>K = $\pm 10$ %<br>M = $\pm 20$ %<br><br><b>Note</b><br>Details see "Selection Chart" | C = non-magnetic copper barrier<br>100 % tin plate matte finish<br>X = Ni barrier<br>100 % tin plate matte finish<br>L = Ni barrier with tin lead plated finish<br>min. 4 % lead | A = 50 V<br>B = 100 V<br>K = 150 V<br>C = 200 V<br>P = 250 V<br>D = 300 V<br>E = 500 V<br>L = 630 V<br>I = 800 V<br>G = 1000 V<br>R = 1500 V<br>F = 2000 V<br>O = 2500 V<br>H = 3000 V<br>W = 3600 V<br>M = 5000 V<br>S = 7200 V | A = unmarked<br>Q = marked | T = 7" reel / plastic tape<br>J = 7" reel (low quantity)<br>R = 11 1/4" / 13" reel / plastic tape<br>W = waffle pack |

**Note**

- <sup>(1)</sup> DC voltage rating should not be exceeded in application

**ENVIRONMENTAL STATUS**

| TERMINATION CODE | TERMINATION DESCRIPTION                                 | RoHS COMPLIANT | VISHAY GREEN |
|------------------|---------------------------------------------------------|----------------|--------------|
| X                | Ni barrier 100 % tin plated matte finish                | Yes            | Yes          |
| L                | Ni barrier with tin lead plated finish min. 4 % lead    | No             | No           |
| C                | Cu barrier 100 % tin plated matte finish (non-magnetic) | Yes            | Yes          |

**DIMENSIONS** in inches (millimeters)


| CASE CODE | STYLE  | LENGTH (L)                                          | WIDTH (W)                                           | MAXIMUM THICKNESS (T) | TERMINATIONS PAD (P) |                        |
|-----------|--------|-----------------------------------------------------|-----------------------------------------------------|-----------------------|----------------------|------------------------|
|           |        |                                                     |                                                     |                       | MINIMUM              | MAXIMUM <sup>(1)</sup> |
| 0505      | VJ0505 | 0.055 + 0.015 / - 0.010<br>(1.40 + 0.382 / - 0.254) | 0.055 $\pm$ 0.015<br>(1.40 $\pm$ 0.38)              | 0.057<br>(1.45)       | 0.004<br>(0.10)      | 0.016<br>(0.41)        |
| 1111      | VJ1111 | 0.117 + 0.015 / - 0.010<br>(2.98 + 0.382 / - 0.254) | 0.110 + 0.015 / - 0.020<br>(2.79 + 0.382 / - 0.509) | 0.102<br>(2.59)       | 0.012<br>(0.30)      | 0.018<br>(0.46)        |
| 2525      | VJ2525 | 0.250 + 0.020 / - 0.025<br>(6.35 + 0.508 / - 0.63)  | 0.250 $\pm$ 0.015<br>(6.35 $\pm$ 0.381)             | 0.102<br>(2.59)       | 0.010<br>(0.25)      | 0.030<br>(0.76)        |
| 3838      | VJ3838 | 0.381 $\pm$ 0.015<br>(9.7 $\pm$ 0.40)               | 0.381 + 0.017 / - 0.015<br>(9.7 + 0.45 / - 0.40)    | 0.118<br>(3.00)       | 0.010<br>(0.25)      | 0.030<br>(0.76)        |

**Note**

- <sup>(1)</sup> For copper terminations add 0.01 mm to maximum termination pad



| SELECTION CHART            |        |         |     |     |     |     |               |
|----------------------------|--------|---------|-----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE)   |        | C0G (D) |     |     |     |     |               |
| STYLE                      |        | VJ0505  |     |     |     |     |               |
| CASE CODE                  |        | 0505    |     |     |     |     |               |
| VOLTAGE (V <sub>DC</sub> ) |        | 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



| SELECTION CHART            |         |         |     |     |     |     |               |
|----------------------------|---------|---------|-----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE)   |         | C0G (D) |     |     |     |     |               |
| STYLE                      |         | VJ0505  |     |     |     |     |               |
| CASE CODE                  |         | 0505    |     |     |     |     |               |
| VOLTAGE (V <sub>DC</sub> ) |         | 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



| SELECTION CHART            |        |         |     |     |     |     |     |      |      |               |
|----------------------------|--------|---------|-----|-----|-----|-----|-----|------|------|---------------|
| DIELECTRIC (VISHAY CODE)   |        | C0G (D) |     |     |     |     |     |      |      |               |
| STYLE                      |        | VJ1111  |     |     |     |     |     |      |      |               |
| CASE CODE                  |        | 1111    |     |     |     |     |     |      |      |               |
| VOLTAGE (V <sub>DC</sub> ) |        | 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 |

## 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 <sub>DC</sub> ) |         | 50      | 100 | 200 | 300 | 500 | 630 | 1000 | 1500          |
| VOLTAGE CODE               |         | A       | B   | C   | D   | E   | L   | G    | R             |
| CAP. CODE                  | CAP.    |         |     |     |     |     |     |      | TOLERANCE     |
| 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 |
| 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 |
| 362                        | 3600 pF | •       | •   | •   | •   | •   | •   | •    | F, G, J, K, M |
| 392                        | 3900 pF | •       | •   | •   | •   | •   | •   | •    | F, G, J, K, M |
| 432                        | 4300 pF | •       | •   | •   | •   | •   | •   | •    | F, G, J, K, M |
| 472                        | 4700 pF | •       | •   | •   | •   | •   | •   | •    | F, G, J, K, M |
| 512                        | 5100 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 <sub>DC</sub> ) |        | 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 <sub>DC</sub> ) |         | 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 <sub>DC</sub> ) |        | 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 <sub>DC</sub> ) |           | 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 | •       |     |      |      |      |      |      |

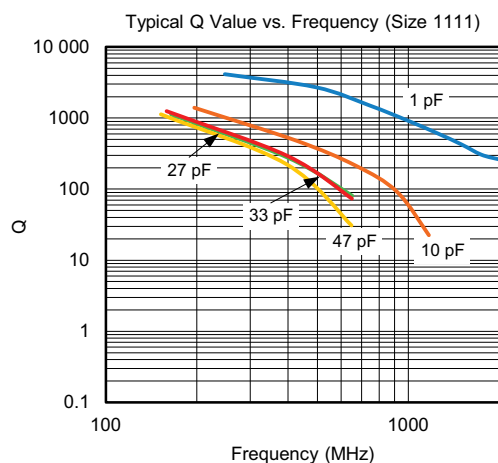
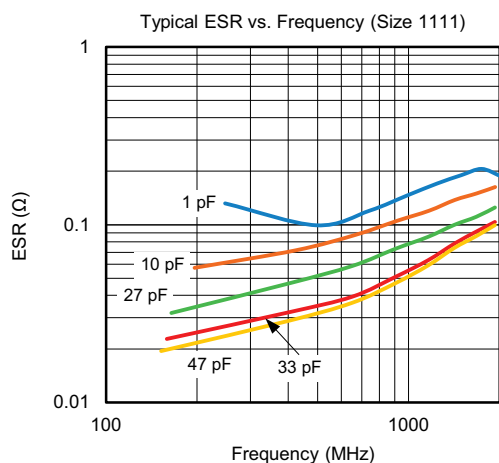
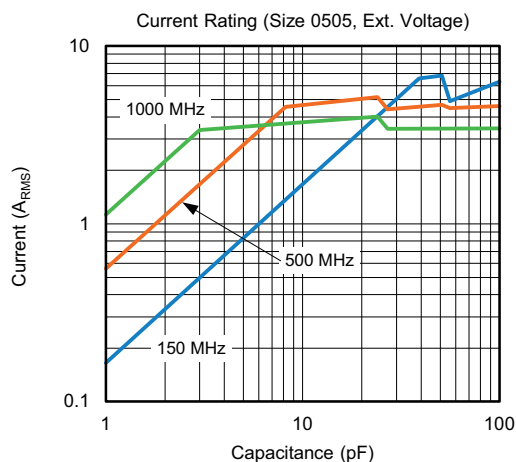
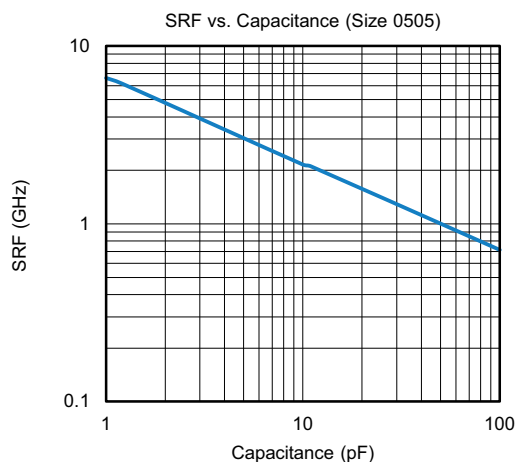
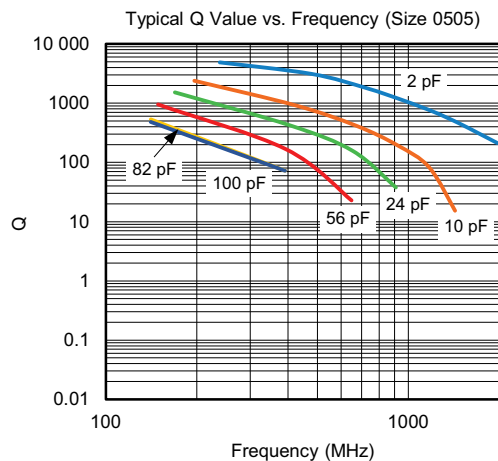
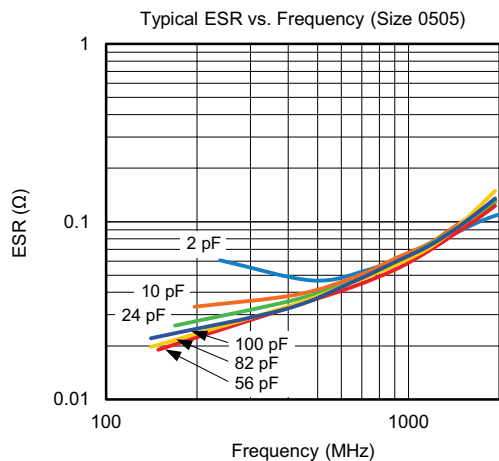
## Notes

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

• Plastic carrier tape

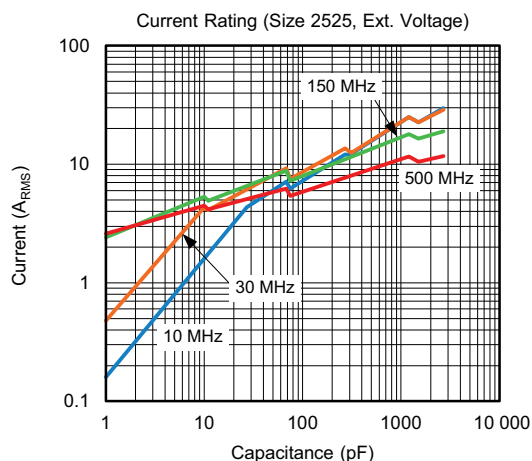
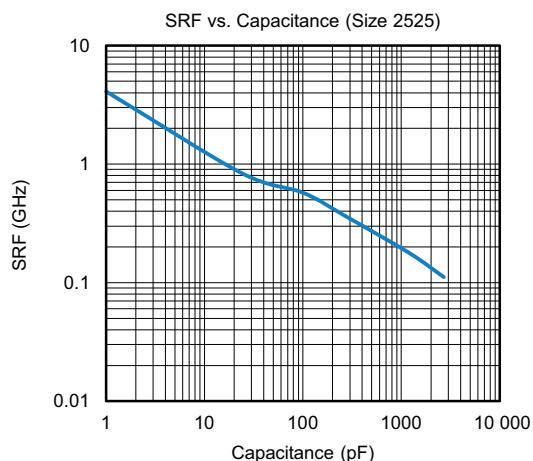
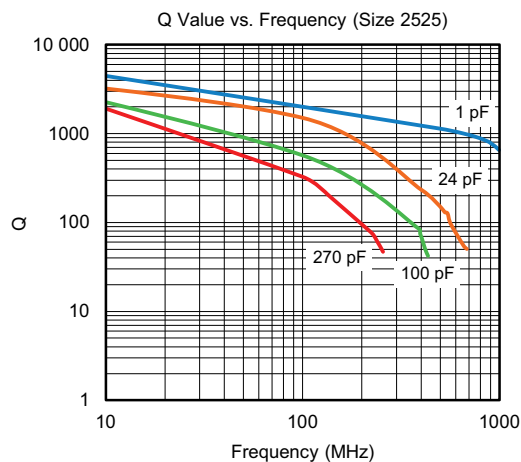
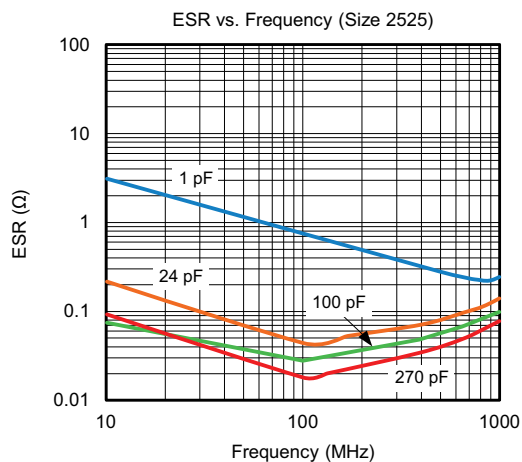
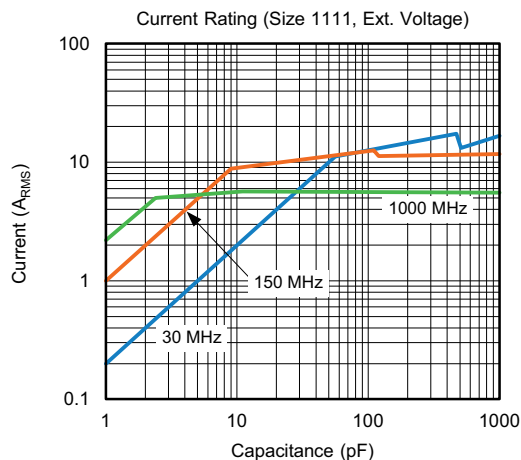
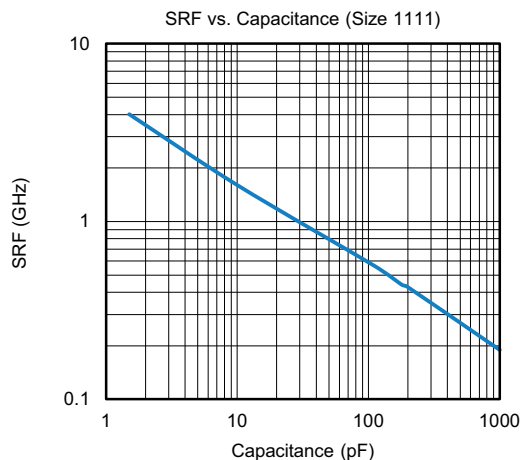


## QUAD HIGH FREQ DIELECTRIC - TYPICAL PARAMETERS

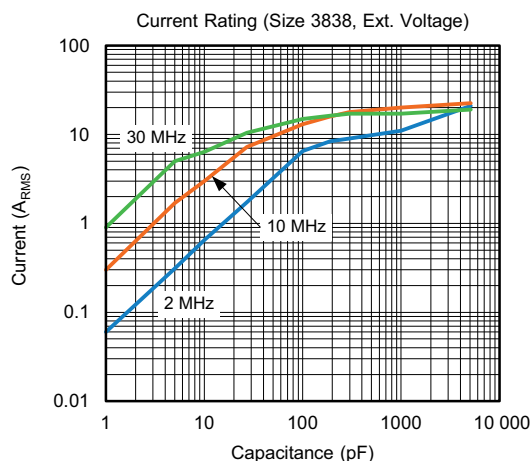
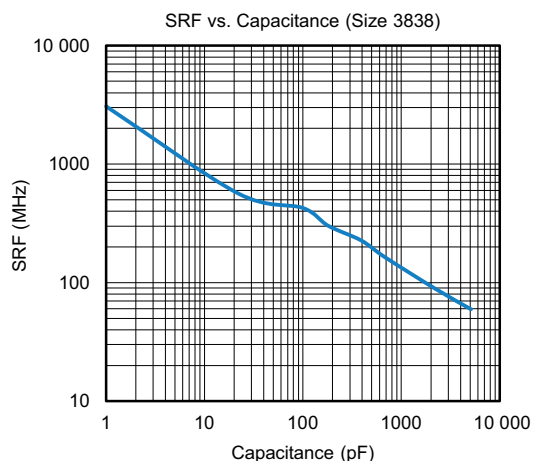
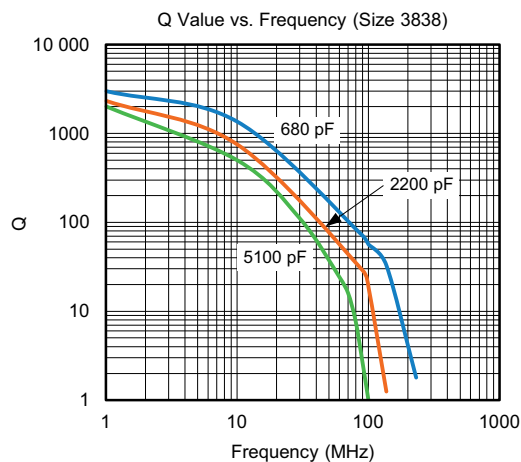
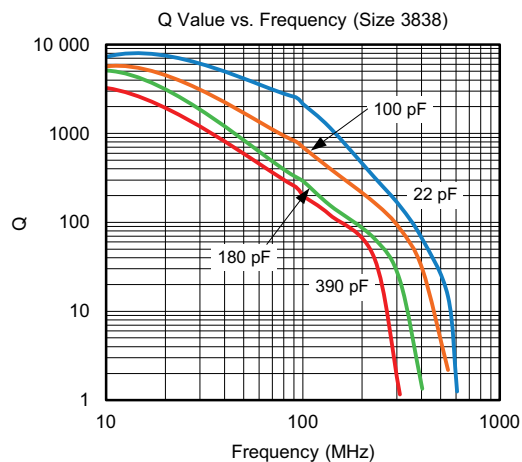
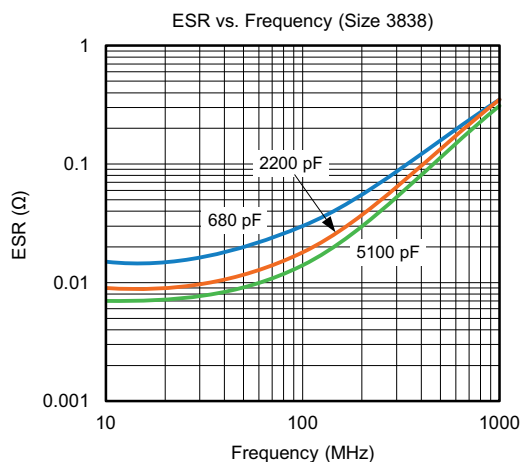
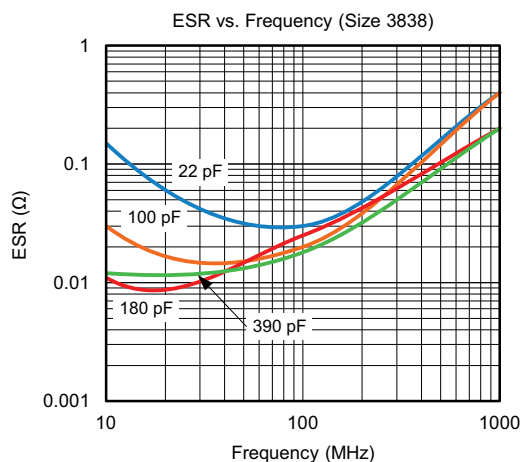


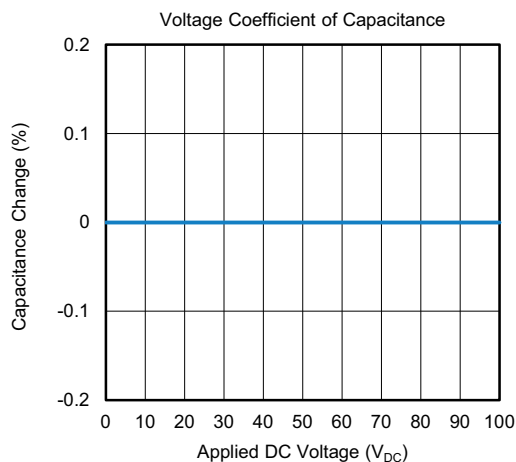
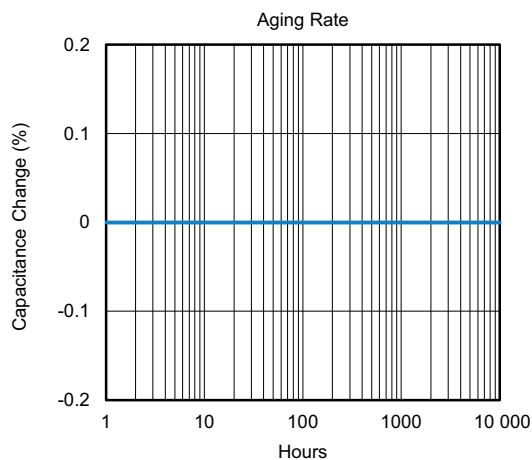
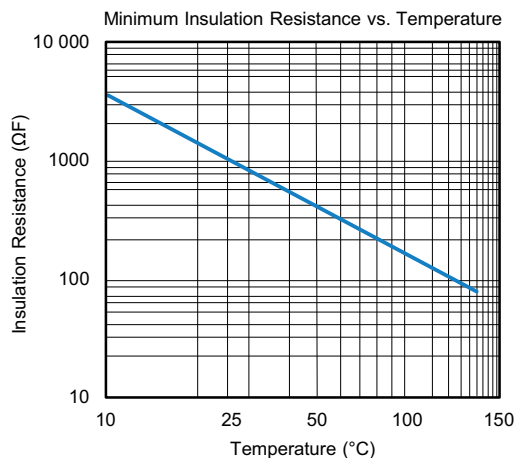
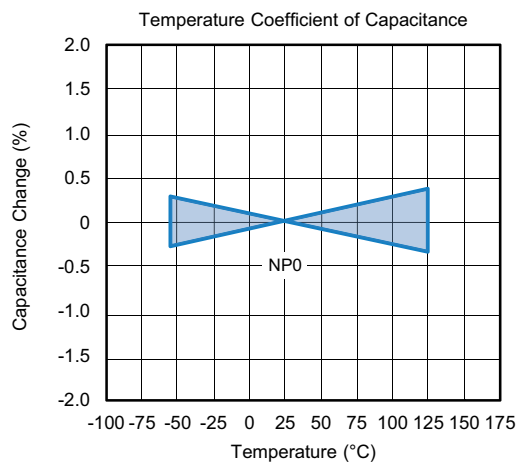


## QUAD HIGH FREQ DIELECTRIC - TYPICAL PARAMETERS



## QUAD HIGH FREQ DIELECTRIC - TYPICAL PARAMETERS




**QUAD HIGH FREQ DIELECTRIC - TYPICAL PARAMETERS**

**STANDARD PACKAGING QUANTITIES (1)(2)(3)(4)**

| CASE CODE | TAPE SIZE | 7" REEL QUANTITIES              |                  | 11 1/4" AND 13" REEL QUANTITIES | WAFFLE PACK                            |
|-----------|-----------|---------------------------------|------------------|---------------------------------|----------------------------------------|
|           |           | PLASTIC TAPE PACKAGING CODE "T" | LOW QUANTITY "J" | PLASTIC TAPE PACKAGING CODE "R" | PLASTIC WAFFLE PACK PACKAGING CODE "W" |
| 0505      | 8 mm      | 3000                            | 1000             | 10 000                          | n/a                                    |
| 1111      | 8 mm      | 2500                            | 1000             | 9000                            | n/a                                    |
| 2525      | 12 mm     | 800                             | 500              | n/a                             | 81                                     |
| 3838      | 16 mm     | 400                             | 100              | 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) Final quantities for packaging can depend on product thickness



## STORAGE AND HANDLING CONDITIONS

- (1) Store the components at 5 °C to 40 °C ambient temperature and  $\leq 70$  % relative humidity conditions.
- (2) The product is recommended to be used within a time-frame of 2 years after shipment (1 year for copper).  
Check solderability in case extended shelf life beyond the expiry date is needed.

### Precautions:

- 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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[KHC201E225M76N0T00](#) [1812J1K00222JCT](#) [1812J2K00102KXT](#) [1812J2K00222KXT](#) [1812J2K00472KXT](#) [2-1622820-7-CUT-TAPE](#)  
[2220J3K00102KXT](#) [2225J2500824KXT](#) [CCR07CG103KM](#) [CGA2B2C0G1H010C](#) [CGA2B2C0G1H040C](#) [CGA2B2C0G1H050C](#)  
[CGA2B2C0G1H060D](#) [CGA2B2C0G1H070D](#) [CGA2B2C0G1H151J](#) [CGA2B2C0G1H1R5C](#) [CGA2B2C0G1H2R2C](#) [CGA2B2C0G1H3R3C](#)  
[CGA2B2C0G1H680J](#) [CGA2B2C0G1H6R8D](#) [CGA2B2X8R1H221K](#) [CGA2B2X8R1H472K](#) [CGA3E1X7R1C474K](#)  
[CGA3E2C0G1H561JT0Y0N](#)