

## 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](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

### 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<sub>DC</sub> to 200 V<sub>DC</sub>  
0505: 50 V<sub>DC</sub> to 250 V<sub>DC</sub>  
0603: 25 V<sub>DC</sub> to 250 V<sub>DC</sub>  
0805: 25 V<sub>DC</sub> to 500 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. 200 % of rated voltage  
> 250 V<sub>DC</sub>-rated: min. 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 = 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

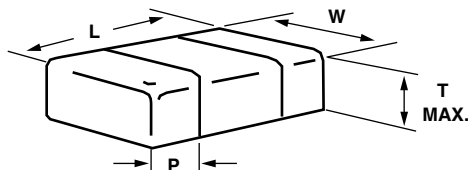
| VJ0603                                               | D          | 101                                                                                                                                                                  | J                                                                                                                                                                                                                           | X                                                                                                                                                                                                                          | A                                                                                                                                                                                                                                            | A                                         | T                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CASE CODE                                            | DIELECTRIC | CAPACITANCE NOMINAL CODE                                                                                                                                             | CAPACITANCE TOLERANCE                                                                                                                                                                                                       | TERMINATION                                                                                                                                                                                                                | DC VOLTAGE RATING <sup>(1)</sup>                                                                                                                                                                                                             | MARKING                                   | PACKAGING <sup>(4)</sup>                                                                                                                                                                                                                                                                                                                    |
| 0402<br>0505<br>0603<br>0805<br>1111<br>2525<br>3838 | D = HIFREQ | Expressed in picofarads (pF). The first two digits are significant, the third is a multiplier. An "R" indicates a decimal point.<br><b>Examples:</b><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" | X = Ni barrier<br>100 % tin plate<br>matte finish<br>C = non-magnetic<br>copper barrier<br>100 % tin plate<br>matte finish<br>E = AgPd <sup>(2)</sup><br>L = Ni barrier<br>with tin lead<br>plated finish<br>min. 4 % lead | X = 25 V<br>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 <sup>(3)</sup><br>Q = marked | T = 7" reel / plastic tape<br>C = 7" reel / paper tape<br>O = 7" reel / flamed paper tape<br>J = 7" reel (low quantity)<br>R = 11 1/4" / 13" reel / plastic tape<br>P = 11 1/4" / 13" reel / paper tape<br>I = 11 1/4" / 13" reel / flamed paper tape<br>W = waffle pack<br><br><b>Note</b><br>"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 <sup>(1)</sup>         |
| 0402      | VJ0402 | 0.040 ± 0.004<br>(1.02 ± 0.10)                      | 0.020 ± 0.004<br>(0.51 ± 0.10)                      | 0.024<br>(0.61)       | 0.004<br>(0.10)      | 0.016<br>(0.41)                |
| 0505      | VJ0505 | 0.055 + 0.015 / - 0.010<br>(1.40 + 0.382 / - 0.254) | 0.055 ± 0.015<br>(1.40 ± 0.38)                      | 0.057<br>(1.45)       | 0.004<br>(0.10)      | 0.016<br>(0.41)                |
| 0603      | VJ0603 | 0.063 ± 0.006<br>(1.60 ± 0.15)                      | 0.031 ± 0.005<br>(0.80 ± 0.12)                      | 0.037<br>(0.94)       | 0.010<br>(0.25)      | 0.022<br>(0.55)                |
| 0805      | VJ0805 | 0.079 ± 0.008<br>(2.00 ± 0.20)                      | 0.049 ± 0.008<br>(1.25 ± 0.20)                      | 0.057<br>(1.45)       | 0.010<br>(0.25)      | 0.030<br>(0.76)                |
| 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 <sup>(2)</sup><br>(0.46) |
| 2525      | VJ2525 | 0.250 + 0.020 / - 0.025<br>(6.35 + 0.508 / - 0.63)  | 0.250 ± 0.015<br>(6.35 ± 0.381)                     | 0.102<br>(2.59)       | 0.010<br>(0.25)      | 0.030 <sup>(3)</sup><br>(0.76) |
| 3838      | VJ3838 | 0.381 ± 0.015<br>(9.7 ± 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 <sup>(3)</sup><br>(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 <sub>DC</sub> ) |        | 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](http://www.vishay.com/doc?45034)



| SELECTION CHART            |        |         |    |     |     |               |
|----------------------------|--------|---------|----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE)   |        | C0G (D) |    |     |     |               |
| STYLE                      |        | VJ0402  |    |     |     |               |
| CASE CODE                  |        | 0402    |    |     |     |               |
| VOLTAGE (V <sub>DC</sub> ) |        | 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](http://www.vishay.com/doc245034)



| 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
- For soldering conditions see Vishay Soldering Recommendations [www.vishay.com/doc?45034](http://www.vishay.com/doc?45034)



| 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
- For soldering conditions see Vishay Soldering Recommendations [www.vishay.com/doc?45034](http://www.vishay.com/doc?45034)



| SELECTION CHART            |        |         |    |     |     |     |               |
|----------------------------|--------|---------|----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE)   |        | C0G (D) |    |     |     |     |               |
| STYLE                      |        | VJ0603  |    |     |     |     |               |
| CASE CODE                  |        | 0603    |    |     |     |     |               |
| VOLTAGE (V <sub>DC</sub> ) |        | 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](http://www.vishay.com/doc?45034)





| SELECTION CHART            |        |         |    |     |     |     |               |
|----------------------------|--------|---------|----|-----|-----|-----|---------------|
| DIELECTRIC (VISHAY CODE)   |        | C0G (D) |    |     |     |     |               |
| STYLE                      |        | VJ0603  |    |     |     |     |               |
| CASE CODE                  |        | 0603    |    |     |     |     |               |
| VOLTAGE (V <sub>DC</sub> ) |        | 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](http://www.vishay.com/doc?45034)



| SELECTION CHART            |        |         |    |     |     |     |     |                  |
|----------------------------|--------|---------|----|-----|-----|-----|-----|------------------|
| DIELECTRIC (VISHAY CODE)   |        | COG (D) |    |     |     |     |     |                  |
| STYLE                      |        | VJ0805  |    |     |     |     |     |                  |
| CASE CODE                  |        | 0805    |    |     |     |     |     |                  |
| VOLTAGE (V <sub>DC</sub> ) |        | 25      | 50 | 100 | 200 | 250 | 500 | TOLERANCE<br>(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](http://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 <sub>DC</sub> ) |        | 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](http://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 <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 |
| 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 <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.    |         |     |     |     |     |     |      |      |               |
| 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 <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                        | 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 |

## 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





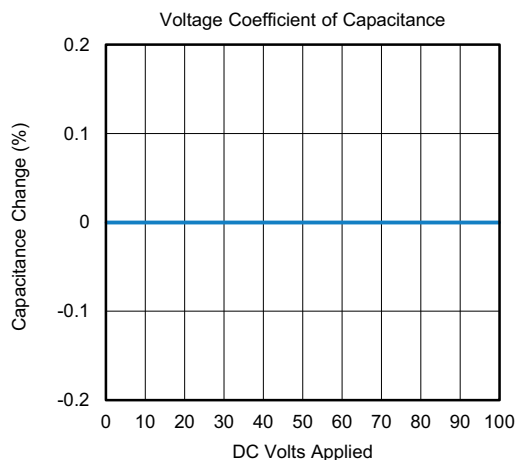
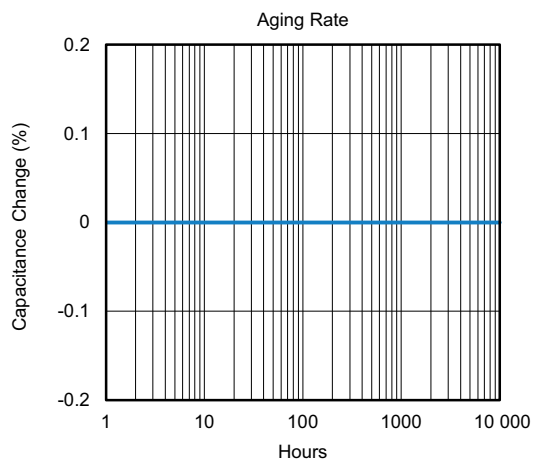
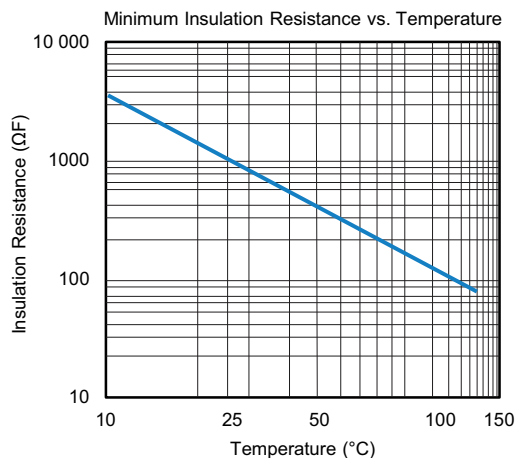
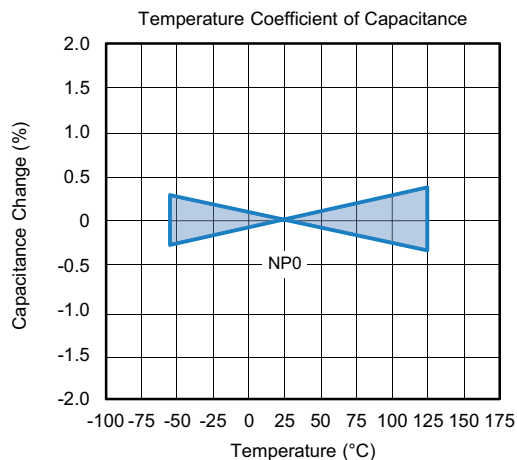
| SELECTION CHART            |           |         |     |      |      |      |      |      |
|----------------------------|-----------|---------|-----|------|------|------|------|------|
| DIELECTRIC (VISHAY CODE)   |           | C0G (D) |     |      |      |      |      |      |
| STYLE                      |           | 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                        | 2200 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

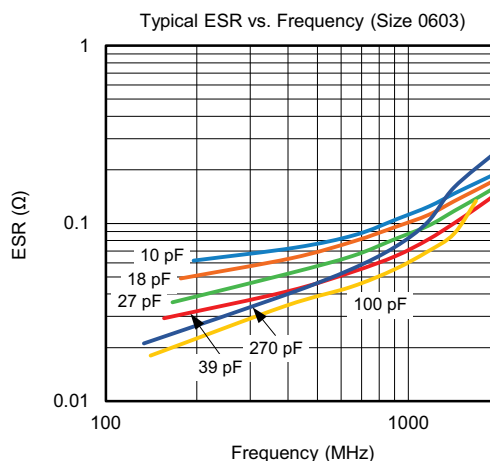
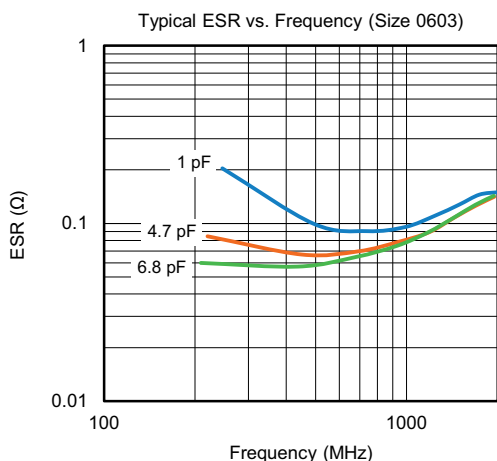
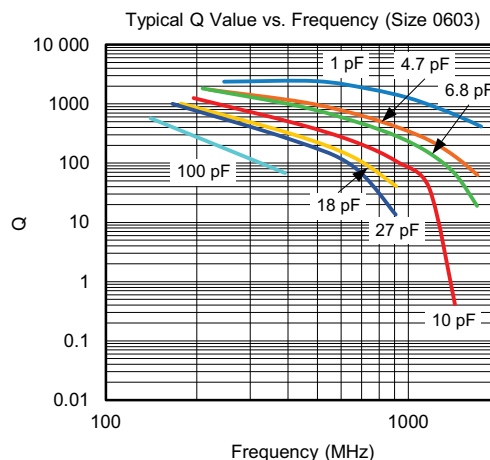
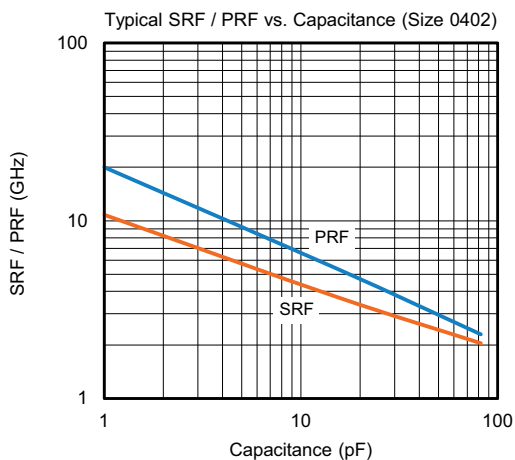
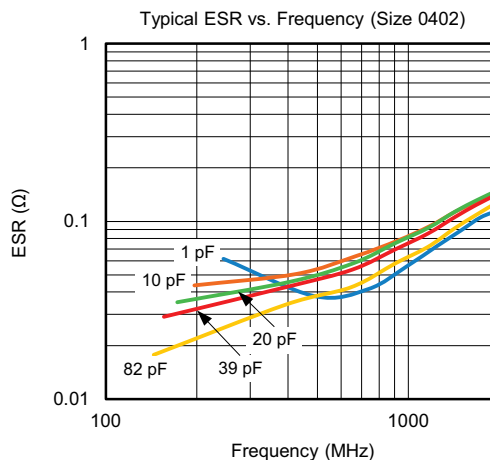
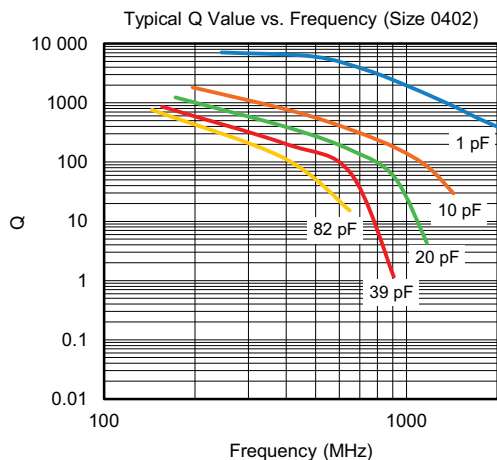


EIA SIZE / QUAD SIZE - TYPICAL PARAMETERS



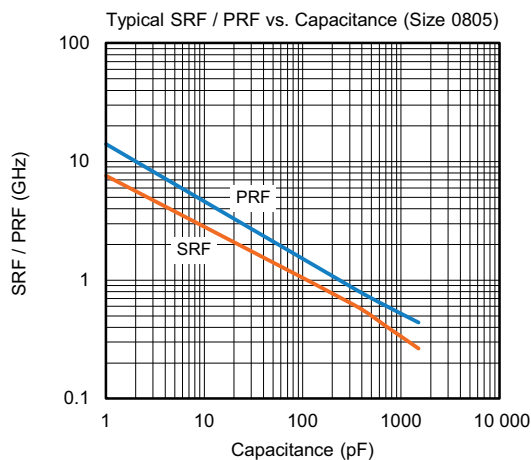
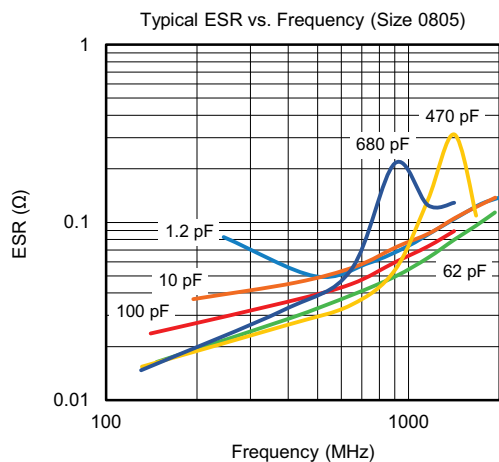
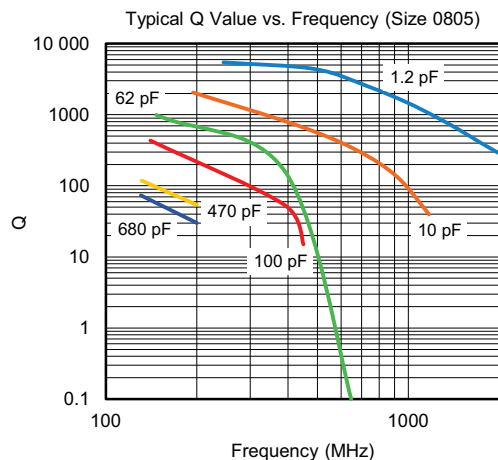
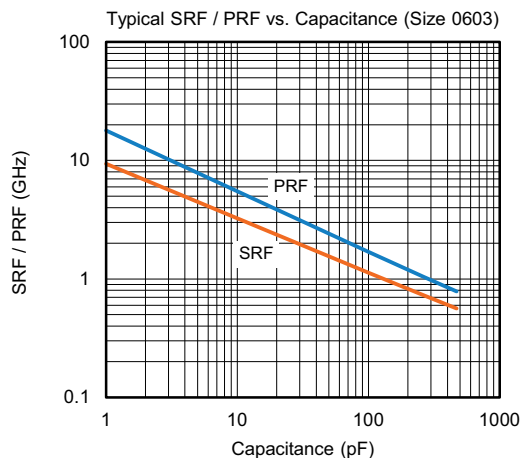


EIA SIZE DIELECTRIC - TYPICAL PARAMETERS

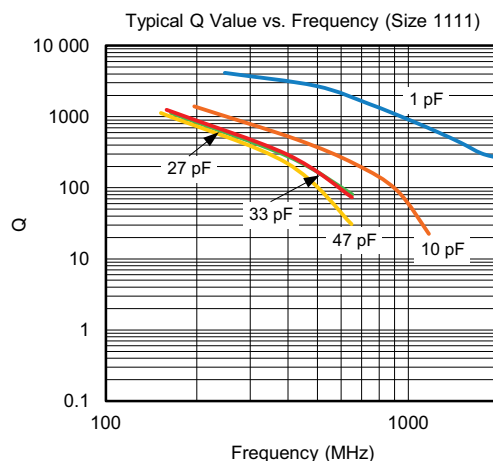
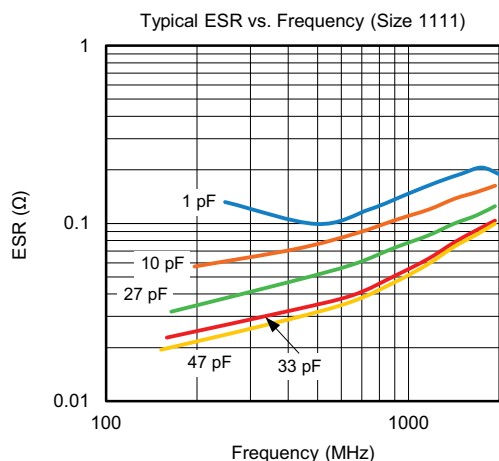
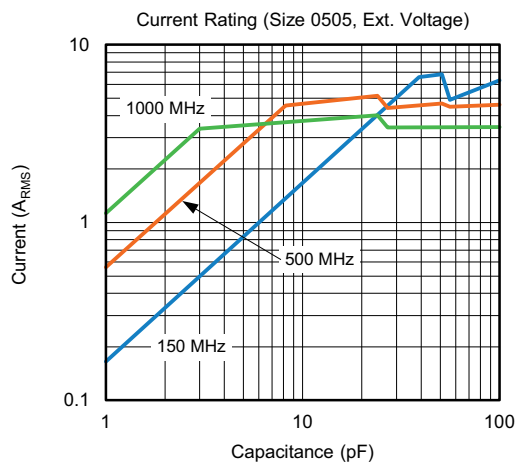
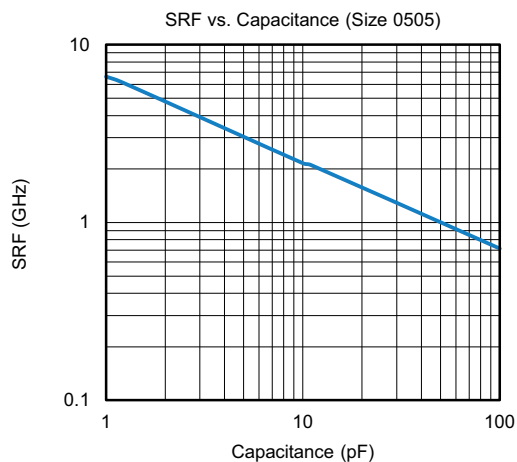
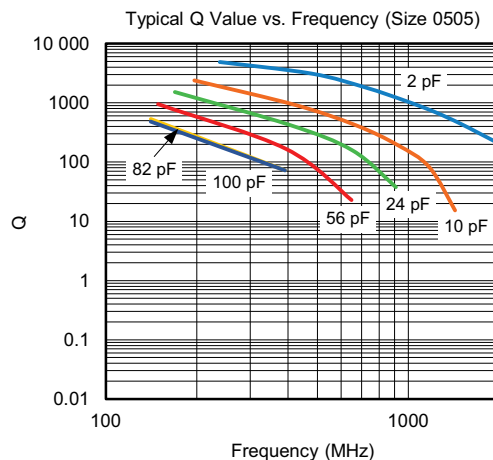
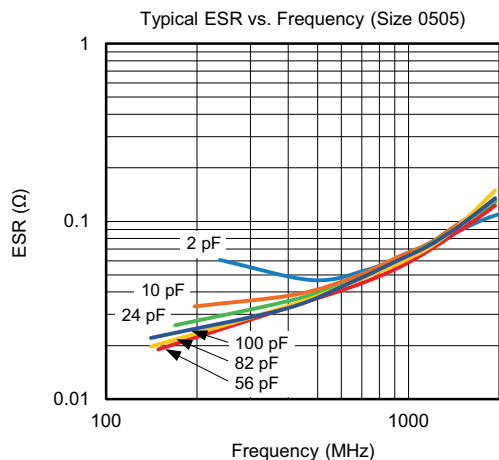




EIA SIZE DIELECTRIC - TYPICAL PARAMETERS

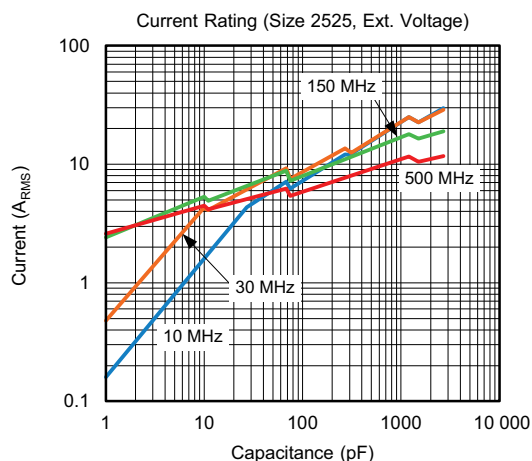
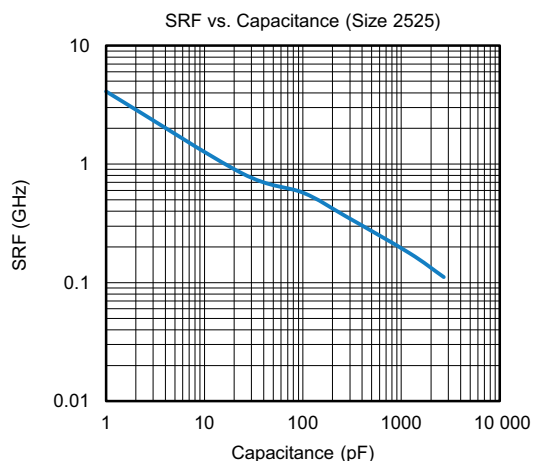
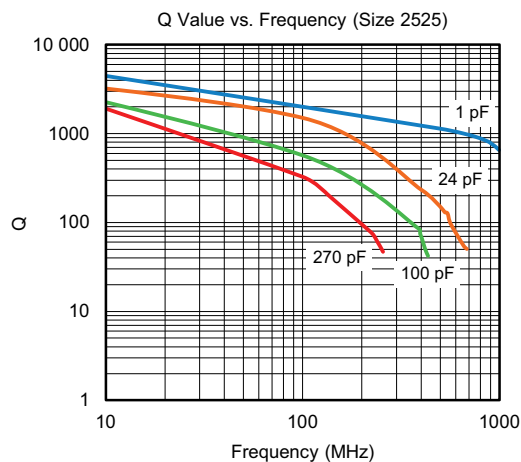
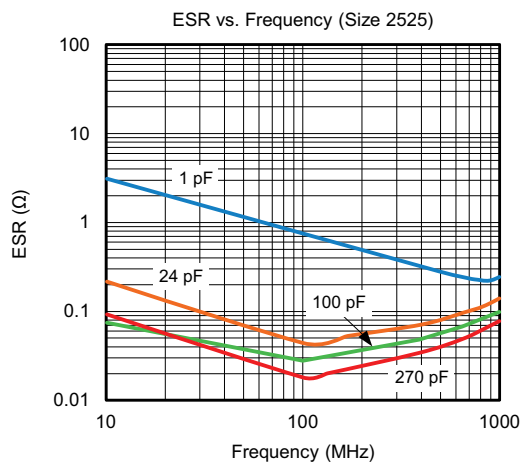
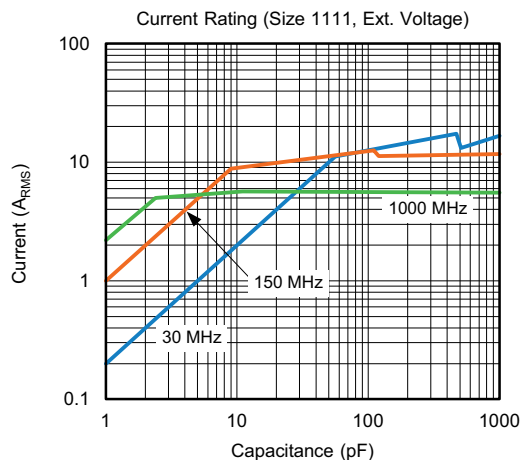
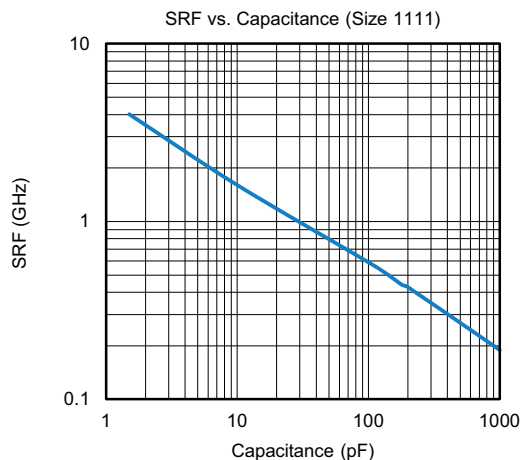


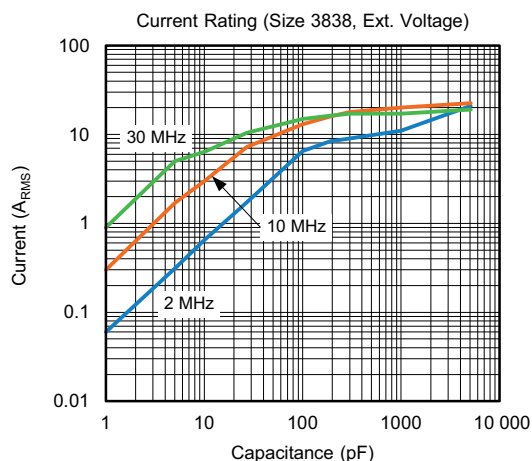
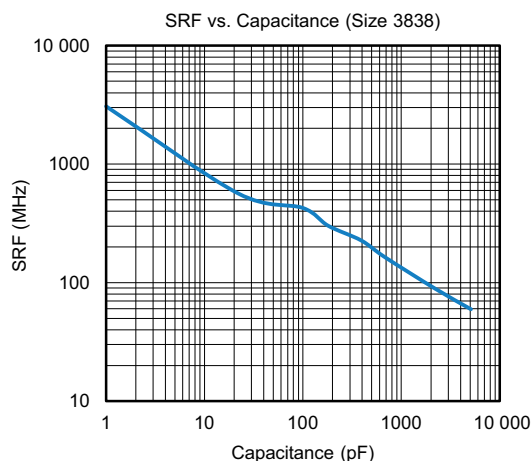
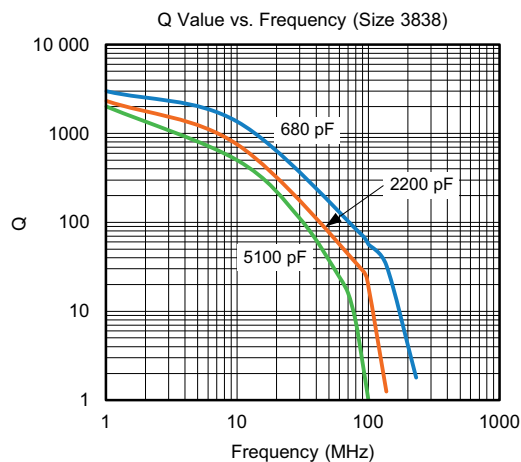
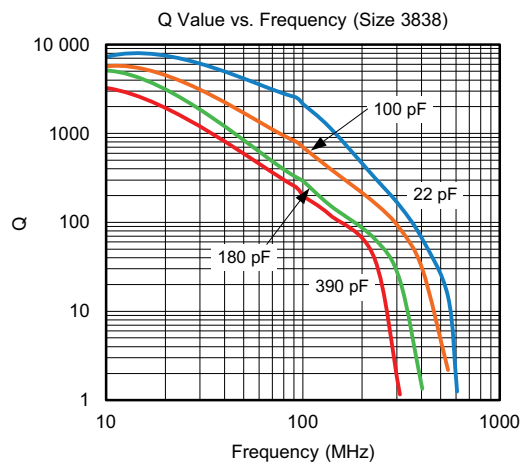
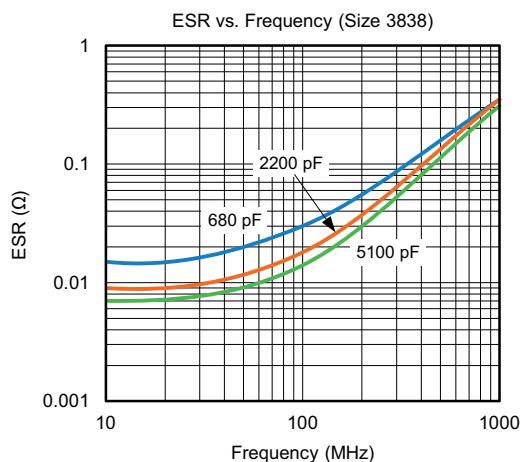
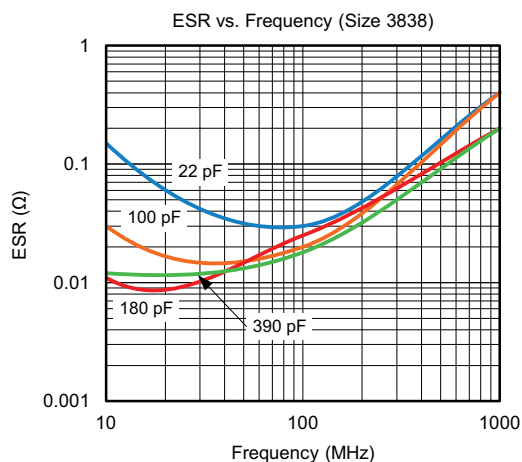
## QUAD SIZE DIELECTRIC - TYPICAL PARAMETERS





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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