



## 0402 HIGH Q NPO CERAMIC CAPACITORS FOR RF & MICROWAVE

- Low ESR, High Q
- Superior Mechanical Strength
- Q = 10,000 at 1 MHz
- For Use Up to Ku-Band
- 100% Made in U.S.A.
- Suitable for Military and Space

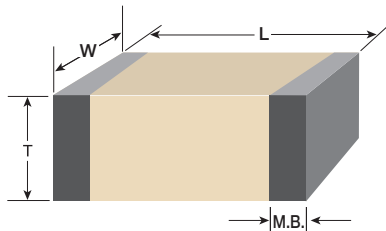
| PRESIDIO PART NUMBER | CAP. (pF) | TOL.          | WVDC     |
|----------------------|-----------|---------------|----------|
| 0402NPO0R5_4N1N-     | 0.05      | 3,4,5,A       | 100, 200 |
| 0402NPO0R1_4N1N-     | 0.1       | 3,4,5,A,B     | 100, 200 |
| 0402NPO0R2_4N1N-     | 0.2       | 3,4,5,A,B     | 100, 200 |
| 0402NPO0R3_4N1N-     | 0.3       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R4_4N1N-     | 0.4       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R5_4N1N-     | 0.5       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R6_4N1N-     | 0.6       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R7_4N1N-     | 0.7       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R8_4N1N-     | 0.8       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO0R9_4N1N-     | 0.9       | 3,4,5,A,B,C   | 100, 200 |
| 0402NPO1R0_4N1N-     | 1.0       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO1R1_4N1N-     | 1.1       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO1R2_4N1N-     | 1.2       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO1R3_4N1N-     | 1.3       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO1R5_4N1N-     | 1.5       | 3,4,5,A,B,C,D | 100, 200 |

| PRESIDIO PART NUMBER | CAP. (pF) | TOL.          | WVDC     |
|----------------------|-----------|---------------|----------|
| 0402NPO1R6_4N1N-     | 1.6       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO1R8_4N1N-     | 1.8       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO2R0_4N1N-     | 2.0       | 3,4,5,A,B,C,D | 100, 200 |
| 0402NPO2R2_4N1N-     | 2.2       | 5,A,B,C,D     | 100, 200 |
| 0402NPO2R4_4N1N-     | 2.4       | 5,A,B,C,D     | 100, 200 |
| 0402NPO2R7_4N1N-     | 2.7       | 5,A,B,C,D     | 100, 200 |
| 0402NPO3R0_4N1N-     | 3.0       | 5,A,B,C,D     | 100, 200 |
| 0402NPO3R3_4N1N-     | 3.3       | A,B,C,D       | 100, 200 |
| 0402NPO3R6_4N1N-     | 3.6       | A,B,C,D       | 100, 200 |
| 0402NPO3R9_4N1N-     | 3.9       | A,B,C,D       | 100, 200 |
| 0402NPO4R3_4N1N-     | 4.3       | A,B,C,D       | 100, 200 |
| 0402NPO4R7_4N1N-     | 4.7       | A,B,C,D       | 100, 200 |
| 0402NPO5R1_4N1N-     | 5.1       | A,B,C,D       | 100, 200 |
| 0402NPO5R6_4N1N-     | 5.6       | A,B,C,D       | 100, 200 |
| 0402NPO6R2_4N1N-     | 6.2       | A,B,C,D       | 100, 200 |

| PRESIDIO PART NUMBER | CAP. (pF) | TOL.    | WVDC     |
|----------------------|-----------|---------|----------|
| 0402NPO6R8_4N1N-     | 6.8       | A,B,C,D | 100, 200 |
| 0402NPO7R5_4N1N-     | 7.5       | A,B,C,D | 100, 200 |
| 0402NPO8R2_4N1N-     | 8.2       | A,B,C,D | 100, 200 |
| 0402NPO9R1_4N1N-     | 9.1       | A,B,C,D | 100, 200 |
| 0402NPO100_4N1N-     | 10        | F,G,J   | 100, 200 |
| 0402NPO110_4N1N-     | 11        | F,G,J   | 100, 200 |
| 0402NPO120_4N1N-     | 12        | F,G,J   | 100, 200 |
| 0402NPO130_4N1N-     | 13        | F,G,J   | 100, 200 |
| 0402NPO150_4N1N-     | 15        | F,G,J   | 100, 200 |
| 0402NPO160_4N1N-     | 16        | F,G,J   | 100, 200 |
| 0402NPO180_4N1N-     | 18        | F,G,J   | 100, 200 |
| 0402NPO200_4N1N-     | 20        | F,G,J   | 100, 200 |
| 0402NPO220_4N1N-     | 22        | F,G,J   | 100, 200 |
| 0402NPO240_4N1N-     | 24        | F,G,J   | 100, 200 |
| 0402NPO270_4N1N-     | 27        | F,G,J   | 100, 200 |

100V = Space  
200V = Commercial

### PART NUMBER CODES AND DIMENSIONS



#### Capacitance Codes for Multilayer Capacitor

First Two Digits = Significant Figures of Capacitance in Picofarads

Third Digit = Additional Number of Zeros

Examples: R05 = 0.05 pF  
0R1 = 0.1 pF  
1R0 = 1 pF  
100 = 10 pF  
101 = 100 pF

#### Capacitance Tolerance Codes

| Code | Tolerance | Cap Range |
|------|-----------|-----------|
| 3    | ± 0.01 pF | ≤ 2 pF    |
| 4    | ± 0.02 pF | ≤ 2 pF    |
| 5    | ± 0.03 pF | ≤ 3 pF    |
| A    | ± 0.05 pF | < 10 pF   |
| B    | ± 0.1 pF  | < 10 pF   |
| C    | ± 0.25 pF | < 10 pF   |
| D    | ± 0.5 pF  | < 10 pF   |
| E    | ± 0.5%    | ≥ 10 pF   |
| F    | ± 1%      | ≥ 10 pF   |
| G    | ± 2%      | ≥ 10 pF   |
| J    | ± 5%      | ≥ 10 pF   |
| K    | ± 10%     | ≥ 10 pF   |
| M    | ± 20%     | ≥ 10 pF   |

| LENGTH (L)<br>INCH (mm)        | WIDTH (W)<br>INCH (mm)          | THICKNESS (T)<br>INCH (mm) | METALIZATION BAND (M.B.)<br>INCH (mm)               |
|--------------------------------|---------------------------------|----------------------------|---|
| 0.040 ± 0.004<br>(1.02 ± 0.10) | 0.020 ± 0.004<br>(0.508 ± 0.10) | 0.024 MAX<br>(0.61) MAX    | 0.004 (0.102) min. band<br>0.015 (0.381) min. space |

#### Termination Codes

| Code | RoHS Comp. | Typical Application | Termination Build up                                     | Recommended Reflow Temp.               |
|------|------------|---------------------|--|--|
| N    | No         | Solder Reflow       | 90% Tin/10% Lead Plated<br>Nickel Barrier<br>Silver Base | 220°C to 260°C Typical                 |
| T    | Yes        | Solder Reflow       | 100% Tin Plated<br>Nickel Barrier<br>Silver Base         | 220°C to 260°C Typical                 |
| P    | Yes        | Conductive Epoxy    | <b>Palladium-Silver Non-Magnetic</b>                     | Cure Epoxy as per Manufacturer's Spec. |

Other terminations available. Please contact factory.

#### Working Voltage

| Code | WVDC |
|------|------|
| E    | 10   |
| G    | 16   |
| 1    | 25   |
| 2    | 50   |
| 3    | 100  |
| A    | 150  |
| 4    | 200  |

#### Packaging Codes

1 = Unmarked, Tape and Reel  
5 = Unmarked, Waffle Pack  
  
Laser Marking Not Available for 0402 Size

#### RoHS

| Code | Compliant |
|------|-----------|
| N    | No        |
| C    | Yes       |

Call factory for digital copy of S2P files.

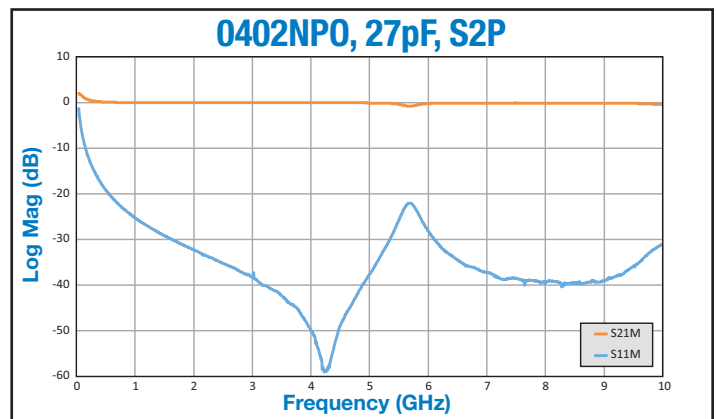
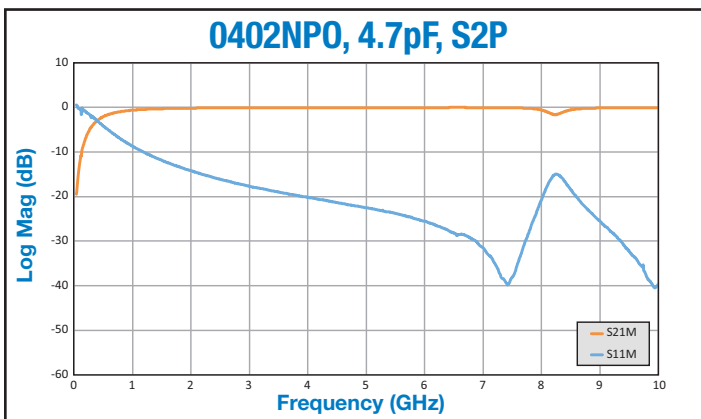
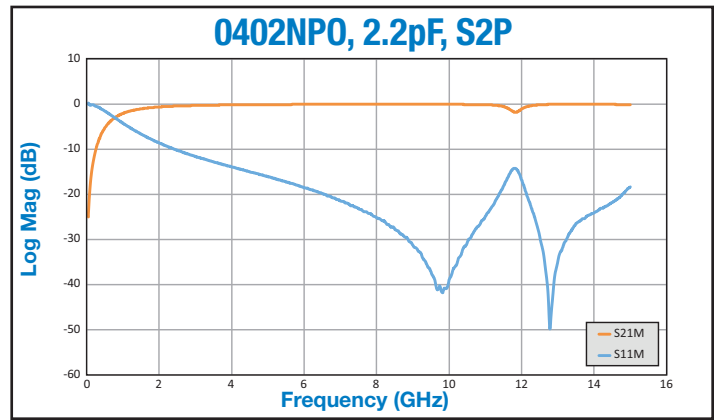
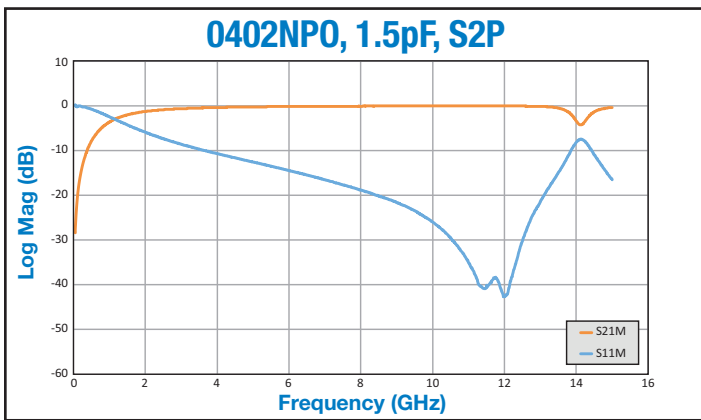
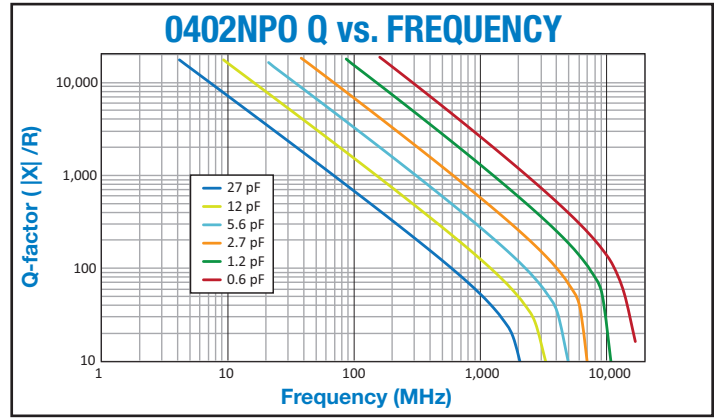
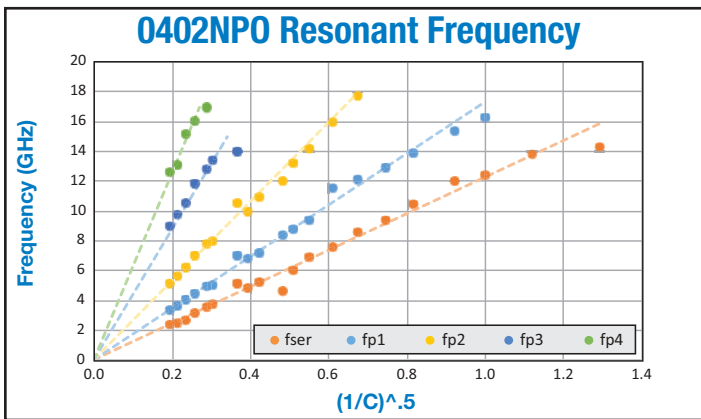
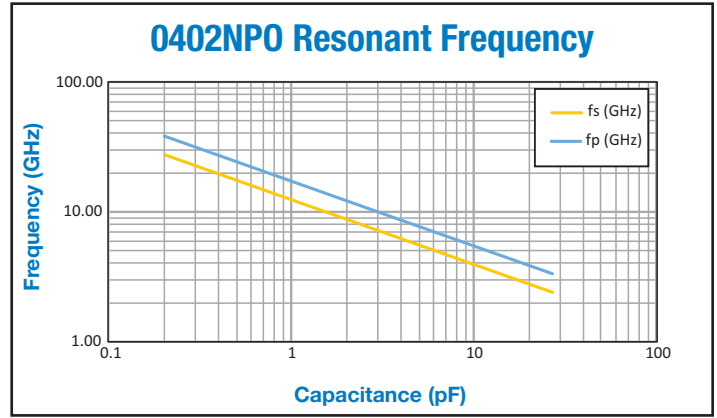
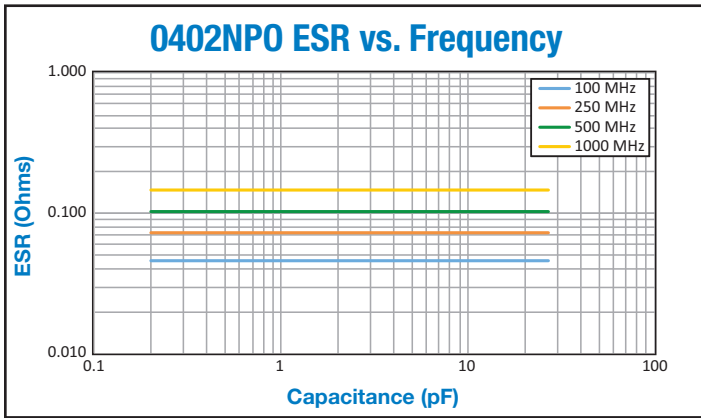
Presidio's NPO capacitors can be upscreened to SPACE LEVEL testing. Consult the factory for details. Some voltage derating may apply.

### PART NUMBER EXAMPLE (How to Order)

MAY 2022

| 0402 | NPO        | 6R8                  | A                                | 4              | N                         | 1                       | N                  | —  |
|------|------------|----------------------|----------------------------------|----------------|---------------------------|-------------------------|--------------------|--|
| Size | Dielectric | Capacitance (6.8 pF) | Capacitance Tolerance (± .05 pF) | Voltage (200V) | Termination (Plated SnPb) | Packaging (Tape & Reel) | Not RoHS Compliant | Design-In Code (optional) (See end of catalog) |

# 0402 HIGH Q NPO CERAMIC CAPACITORS PERFORMANCE CHARTS



Call factory for digital copy of the 0402 NPO S2P files.



PRESIDIO COMPONENTS, INC.

MAY 2022

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