

# 0505 NPO CERAMIC CAPACITORS FOR RF AND MICROWAVE

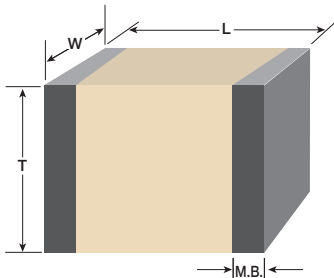
| PRESIDIO PART NUMBER | CAP. (pF) | TOL.    | VWDC STD, EXT |
|----------------------|-----------|---------|---------------|
| 0505NPO05MAN1N-      | 0.05      | M       | 150, 250      |
| 0505NPO0R1_AN1N-     | 0.1       | A,B     | 150, 250      |
| 0505NPO0R2_AN1N-     | 0.2       | A,B,C   | 150, 250      |
| 0505NPO0R3_AN1N-     | 0.3       | A,B,C   | 150, 250      |
| 0505NPO0R4_AN1N-     | 0.4       | A,B,C   | 150, 250      |
| 0505NPO0R5_AN1N-     | 0.5       | A,B,C   | 150, 250      |
| 0505NPO0R6_AN1N-     | 0.6       | A,B,C   | 150, 250      |
| 0505NPO0R7_AN1N-     | 0.7       | A,B,C   | 150, 250      |
| 0505NPO0R8_AN1N-     | 0.8       | A,B,C   | 150, 250      |
| 0505NPO0R9_AN1N-     | 0.9       | A,B,C   | 150, 250      |
| 0505NPO1R0_AN1N-     | 1.0       | A,B,C   | 150, 250      |
| 0505NPO1R1_AN1N-     | 1.1       | A,B,C,D | 150, 250      |
| 0505NPO1R2_AN1N-     | 1.2       | A,B,C,D | 150, 250      |
| 0505NPO1R3_AN1N-     | 1.3       | A,B,C,D | 150, 250      |
| 0505NPO1R5_AN1N-     | 1.5       | A,B,C,D | 150, 250      |
| 0505NPO1R6_AN1N-     | 1.6       | A,B,C,D | 150, 250      |
| 0505NPO1R8_AN1N-     | 1.8       | A,B,C,D | 150, 250      |
| 0505NPO2R0_AN1N-     | 2.0       | A,B,C,D | 150, 250      |
| 0505NPO2R2_AN1N-     | 2.2       | A,B,C,D | 150, 250      |
| 0505NPO2R4_AN1N-     | 2.4       | A,B,C,D | 150, 250      |
| 0505NPO2R7_AN1N-     | 2.7       | A,B,C,D | 150, 250      |
| 0505NPO3R0_AN1N-     | 3.0       | A,B,C,D | 150, 250      |
| 0505NPO3R3_AN1N-     | 3.3       | A,B,C,D | 150, 250      |
| 0505NPO3R6_AN1N-     | 3.6       | A,B,C,D | 150, 250      |
| 0505NPO3R9_AN1N-     | 3.9       | A,B,C,D | 150, 250      |
| 0505NPO4R3_AN1N-     | 4.3       | A,B,C,D | 150, 250      |
| 0505NPO4R7_AN1N-     | 4.7       | A,B,C,D | 150, 250      |
| 0505NPO5R1_AN1N-     | 5.1       | A,B,C,D | 150, 250      |

| PRESIDIO PART NUMBER | CAP. (pF) | TOL.      | VWDC STD, EXT |
|----------------------|-----------|-----------|---------------|
| 0505NPO5R6_AN1N-     | 5.6       | A,B,C     | 150, 250      |
| 0505NPO6R2_AN1N-     | 6.2       | A,B,C     | 150, 250      |
| 0505NPO6R8_AN1N-     | 6.8       | A,B,C     | 150, 250      |
| 0505NPO7R5_AN1N-     | 7.5       | A,B,C,D   | 150, 250      |
| 0505NPO8R2_AN1N-     | 8.2       | A,B,C,D   | 150, 250      |
| 0505NPO9R1_AN1N-     | 9.1       | A,B,C,D   | 150, 250      |
| 0505NPO100_AN1N-     | 10        | F,G,J,K   | 150, 250      |
| 0505NPO110_AN1N-     | 11        | F,G,J,K   | 150, 250      |
| 0505NPO120_AN1N-     | 12        | F,G,J,K   | 150, 250      |
| 0505NPO130_AN1N-     | 13        | F,G,J,K   | 150, 250      |
| 0505NPO150_AN1N-     | 15        | F,G,J,K   | 150, 250      |
| 0505NPO160_AN1N-     | 16        | F,G,J,K   | 150, 250      |
| 0505NPO180_AN1N-     | 18        | F,G,J,K   | 150, 250      |
| 0505NPO200_AN1N-     | 20        | F,G,J,K,M | 150, 250      |
| 0505NPO220_AN1N-     | 22        | F,G,J,K,M | 150, 250      |
| 0505NPO240_AN1N-     | 24        | F,G,J,K,M | 150, 250      |
| 0505NPO270_AN1N-     | 27        | F,G,J,K,M | 150, 250      |
| 0505NPO300_AN1N-     | 30        | F,G,J,K,M | 150, 250      |
| 0505NPO330_AN1N-     | 33        | F,G,J,K,M | 150, 250      |
| 0505NPO360_AN1N-     | 36        | F,G,J,K,M | 150, 250      |
| 0505NPO390_AN1N-     | 39        | F,G,J,K,M | 150, 250      |
| 0505NPO430_AN1N-     | 43        | F,G,J,K,M | 150, 250      |
| 0505NPO470_AN1N-     | 47        | F,G,J,K,M | 150, 250      |
| 0505NPO510_AN1N-     | 51        | F,G,J,K,M | 150, 250      |
| 0505NPO560_AN1N-     | 56        | F,G,J,K,M | 150, 250      |
| 0505NPO620_AN1N-     | 62        | F,G,J,K,M | 150, 250      |
| 0505NPO680_AN1N-     | 68        | F,G,J,K,M | 150, 250      |
| 0505NPO750_AN1N-     | 75        | F,G,J,K,M | 150, 250      |

| PRESIDIO PART NUMBER | CAP. (pF) | TOL.      | VWDC STD, EXT |
|----------------------|-----------|-----------|---------------|
| 0505NPO820_AN1N-     | 82        | F,G,J,K,M | 150, 250      |
| 0505NPO910_AN1N-     | 91        | F,G,J,K,M | 150, 250      |
| 0505NPO101_AN1N-     | 100       | F,G,J,K,M | 150, 250      |
| 0505NPO111_AN1N-     | 110       | F,G,J,K,M | 150           |
| 0505NPO121_AN1N-     | 120       | F,G,J,K,M | 150           |
| 0505NPO131_AN1N-     | 130       | F,G,J,K,M | 150           |
| 0505NPO151_AN1N-     | 150       | F,G,J,K,M | 150           |
| 0505NPO161_AN1N-     | 160       | F,G,J,K,M | 150           |
| 0505NPO181_AN1N-     | 180       | F,G,J,K,M | 150           |
| 0505NPO201_AN1N-     | 200       | F,G,J,K,M | 150           |
| 0505NPO221_AN1N-     | 220       | F,G,J,K,M | 150           |
| 0505NPO241_AN1N-     | 240       | F,G,J,K,M | 150           |
| 0505NPO271_AN1N-     | 270       | F,G,J,K,M | 150           |
| 0505NPO301_AN1N-     | 300       | F,G,J,K,M | 150           |
| 0505NPO331_AN1N-     | 330       | F,G,J,K,M | 150           |
| 0505NPO361_AN1N-     | 360       | F,G,J,K,M | 150           |
| 0505NPO391_AN1N-     | 390       | F,G,J,K,M | 150           |
| 0505NPO431_AN1N-     | 430       | F,G,J,K,M | 150           |
| 0505NPO471_AN1N-     | 470       | F,G,J,K,M | 150           |
| 0505NPO511_AN1N-     | 510       | F,G,J,K,M | 150           |
| 0505NPO561_AN1N-     | 560       | F,G,J,K,M | 150           |
| 0505NPO621_AN1N-     | 620       | F,G,J,K,M | 150           |
| 0505NPO681_2N1N-*    | 680       | F,G,J,K,M | 50            |
| 0505NPO751_2N1N-*    | 750       | F,G,J,K,M | 50            |
| 0505NPO821_2N1N-*    | 820       | F,G,J,K,M | 50            |
| 0505NPO911_2N1N-*    | 910       | F,G,J,K,M | 50            |
| 0505NPO102_2N1N-*    | 1000      | F,G,J,K,M | 50            |

For other cap values contact factory.  
Voltages in **BOLD** are for military and space.

## 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

Example: 0R1 = 0.1 pF  
1R0 = 1 pF  
100 = 10 pF  
101 = 100 pF  
102 = 1,000 pF  
103 = 10,000 pF

### Capacitance Tolerance Codes

| Code | Tolerance | Cap Range |
|------|-----------|-----------|
| 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)               |
|--|----------------------------------|----------------------------|---|
| 0.055 + 0.015/ - 0.010<br>(1.397 + 0.381/ - 0.254) | 0.055 ± 0.015<br>(1.397 ± 0.381) | 0.057 MAX<br>(1.448 MAX)   | 0.005 (0.127) min. band<br>0.015 (0.381) min. space |

### Termination Codes

| Code | RoHS Comp. | Typical Application                | Termination Build up                                     | Recommended Reflow Temp.                  |
|------|------------|------------------------------------|--|---|
| T    | Yes        | Solder Reflow                      | 100% Tin Plated<br>Nickel Barrier<br>Silver Base         | 220°C to 260°C Typical                    |
| X    | Yes        | Solder Reflow                      | 100% Tin Plated<br>Non-Magnetic Barrier<br>Silver Base   | 220°C to 260°C Typical                    |
| N    | No         | Solder Reflow                      | 90% Tin/10% Lead Plated<br>Nickel Barrier<br>Silver Base | 220°C to 260°C Typical                    |
| P    | Yes        | Conductive Epoxy<br>Non-Magnetic   | Palladium-Silver   | Cure Epoxy as per<br>Manufacturer's Spec. |
| G    | Yes        | Conductive Epoxy,<br>Wire Bondable | 50 μ" Gold Typical<br>Nickel Barrier<br>Silver Base      | Cure Epoxy as per<br>Manufacturer's Spec. |
| M    | Yes        | Solder Reflow                      | 100% Tin Plated<br>Non-Magnetic                          | 220°C to 260°C Typical                    |

### Working Voltage

| Code | VWDC |
|------|------|
| 1    | 25   |
| 2    | 50   |
| 3    | 100  |
| A    | 150  |
| 4    | 200  |
| &    | 250  |

### Packaging Codes

1 = Tape and Reel  
5 = Waffle Pack  
  
Marking available upon request (extra cost)

### RoHS

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

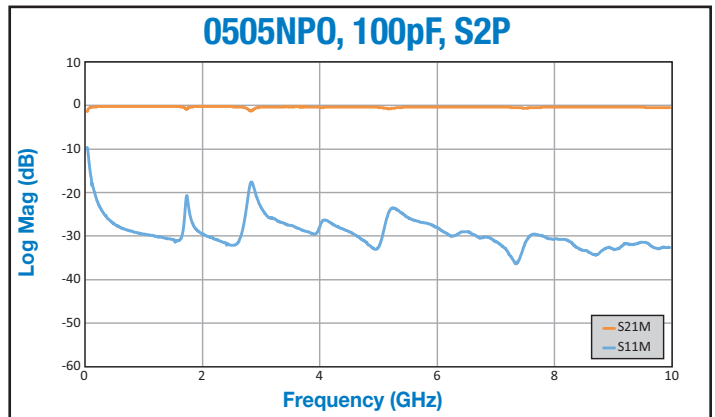
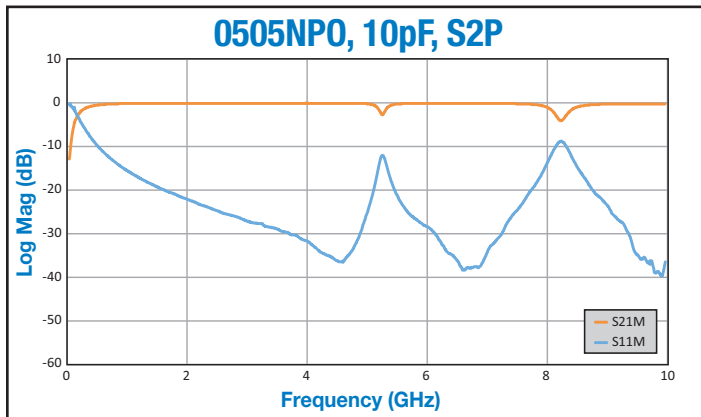
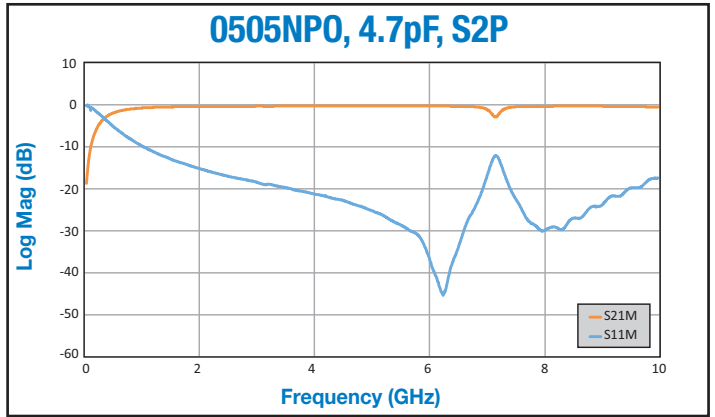
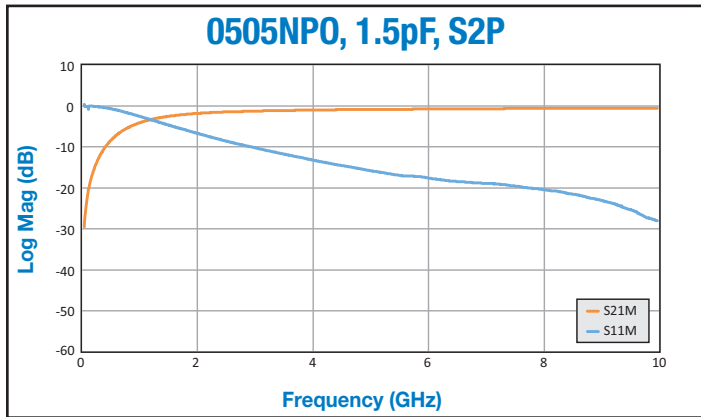
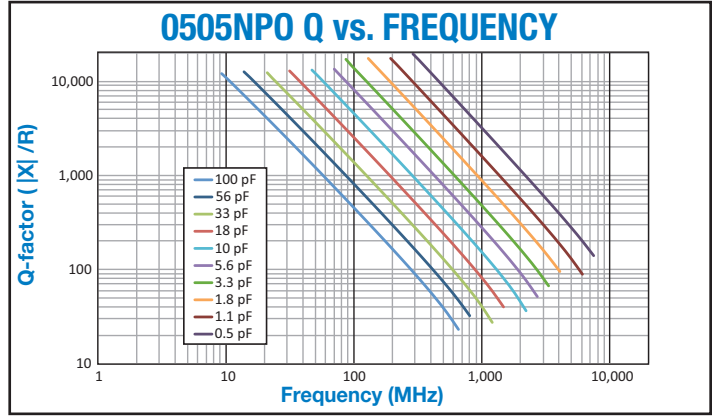
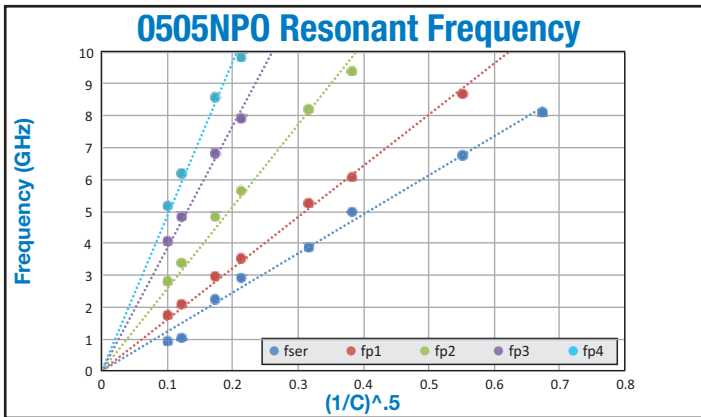
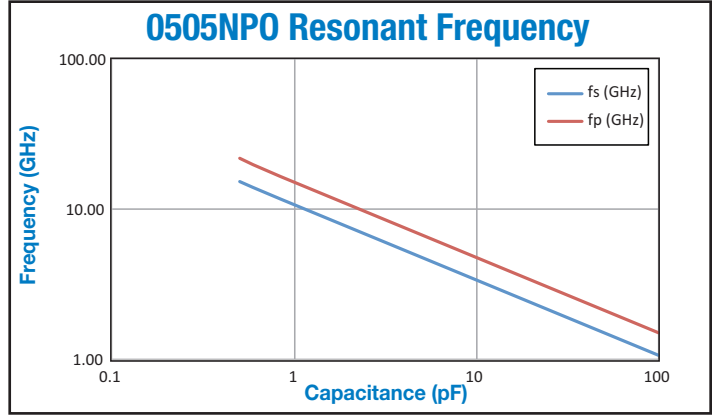
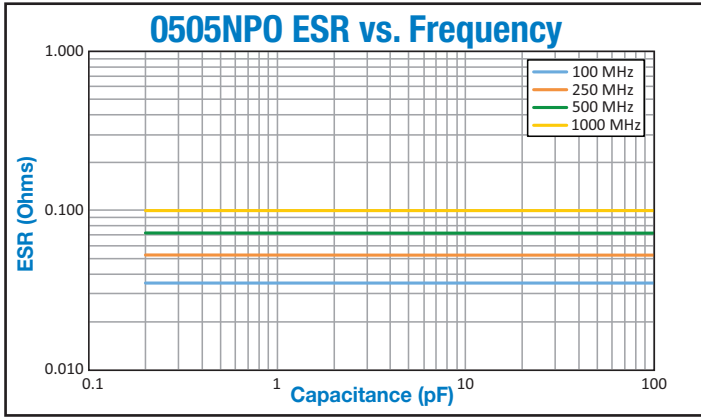
**Presidio's NPO capacitors can be upscreened to SPACE LEVEL testing. Consult the factory for details. Some voltage derating may apply.**

*Call factory for digital copy of S2P files.*

## PART NUMBER EXAMPLE (How to Order)

| 0505 | NPO        | 101                  | F                            | A               | N                         | 1                         | N              | _                            |
|------|------------|----------------------|------------------------------|-----------------|---------------------------|---------------------------|----------------|------------------------------|
| Size | Dielectric | Capacitance (100 pF) | Capacitance Tolerance (± 1%) | Voltage (150 V) | Termination (Plated SnPb) | Packaging (Tape and Reel) | RoHS Compliant | Design-In Code (See Page 19) |

# 0505 NPO CERAMIC CAPACITORS PERFORMANCE CHARTS



Call factory for digital copy of the 0505 NPO S2P files.



PRESIDIO COMPONENTS, INC.

7169 Construction Court, San Diego, CA 92121 • (858) 578-9390 • info@presidiocomponents.com

# A WORD TO THE DESIGN ENGINEER

After the design work is done, outsourcing manufacturing on a global basis is a management option. At Presidio Components, we are striving for complete customer satisfaction which includes “after” service for all of our products.

We added a “Design In” locator code for quick traceability, if needed. Please select your location from the list below and add the appropriate code at the end of the part number.

If you need assistance give us a call at **(858) 578-9390** or email us at **info@presidiocomponents.com**.

## UNITED STATES

## OUTSIDE THE UNITED STATES

| USA                  | Code | USA               | Code | Americas                    | Code | Europe                   | Code |
|----------------------|------|-------------------|------|-----------------------------|------|--------------------------|------|
| Alabama              | G    | Nebraska          | P    | Canada                      | R    | Austria                  | 3    |
| Alaska               | P    | Nevada, North     | B    | Mexico                      | R    | Belgium                  | 1    |
| Arizona              | D    | Nevada, South     | C    | Caribbean                   | R    | Denmark                  | 5    |
| Arkansas             | P    | New Hampshire     | L    | Central America             | R    | Finland                  | 5    |
| California, North    | B    | New Jersey        | J    | South America               | R    | France                   | 2    |
| California, South    | C    | New Mexico        | D    |                             |      | Germany                  | 3    |
| Colorado             | E    | New York, Metro   | J    | <b>Pacific Rim</b>          |      | Ireland                  | 6    |
| Connecticut          | L    | New York, Upstate | K    | Australia                   | S    | Italy                    | 4    |
| Delaware             | I    | North Carolina    | G    | China                       | T    | Luxembourg               | 1    |
| District of Columbia | H    | North Dakota      | O    | Japan                       | U    | Netherlands              | 1    |
| Florida              | G    | Ohio              | M    | Korea, South                | V    | Norway                   | 5    |
| Georgia              | G    | Oklahoma          | P    | Malaysia                    | W    | Sweden                   | 5    |
| Hawaii               | P    | Oregon            | A    | Singapore                   | X    | Switzerland              | 3    |
| Idaho                | A    | Pennsylvania      | I    | Other Pacific Rim Countries | Y    | United Kingdom           | 6    |
| Illinois             | N    | Rhode Island      | L    |                             |      | Other European Countries | 7    |
| Indiana              | M    | South Carolina    | G    |                             |      | <b>Other</b>             |      |
| Iowa                 | O    | South Dakota      | O    |                             |      | India                    | Z    |
| Kansas               | P    | Tennessee         | G    |                             |      | Israel                   | 8    |
| Kentucky             | M    | Texas             | F    |                             |      | Rest of World            | 9    |
| Louisiana            | P    | Utah              | E    |                             |      |                          |      |
| Maine                | L    | Vermont           | L    |                             |      |                          |      |
| Maryland             | H    | Virginia          | H    |                             |      |                          |      |
| Massachusetts        | L    | Washington        | A    |                             |      |                          |      |
| Michigan             | N    | West Virginia     | P    |                             |      |                          |      |
| Minnesota            | O    | Wisconsin, East   | N    |                             |      |                          |      |
| Mississippi          | G    | Wisconsin, West   | O    |                             |      |                          |      |
| Missouri             | N    | Wyoming           | E    |                             |      |                          |      |
| Montana              | A    |                   |      |                             |      |                          |      |

**PART NUMBER EXAMPLE:**  
**0505NPO101FAN1NA**  
**PART DESCRIPTION: Ceramic Capacitor,**  
**0505, NPO, 100pF ± 1%,**  
**150 VDC, Plated SnPb, Tape and Reel,**  
**Non RoHS, Design-In Code A for**  
**Washington State.**