

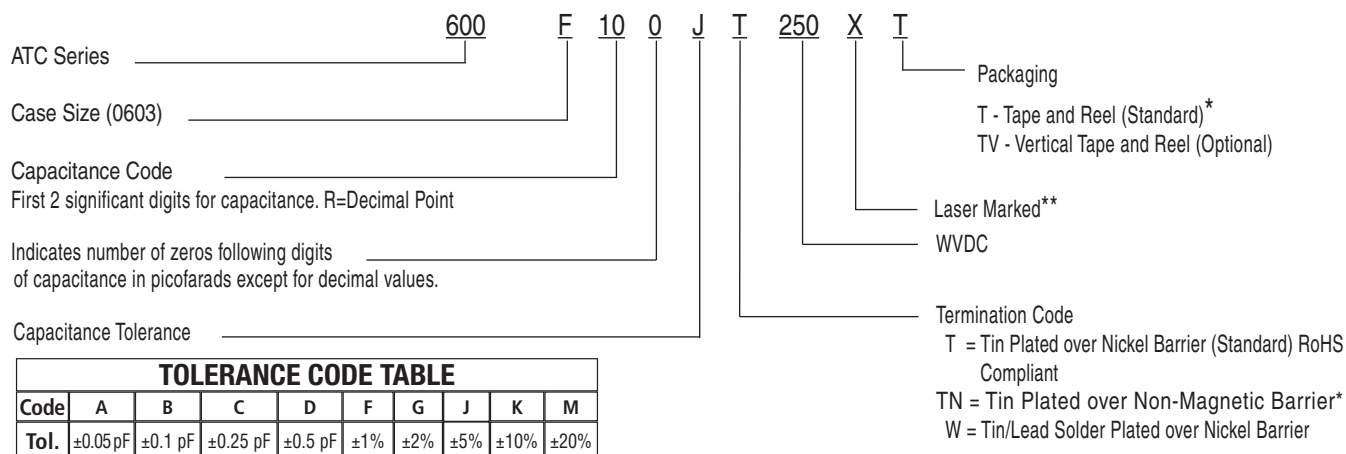
# ATC 600F Series Ultra-Low ESR, High Q NPO RF & Microwave Capacitors

## Capacitance Values\*

| Value (pF) | Cap Code | Marking | Tolerances | Value (pF) | Cap Code | Marking | Tolerances    | Value (pF) | Cap Code | Marking | Tolerances    |
|------------|----------|---------|------------|------------|----------|---------|---------------|------------|----------|---------|---------------|
| 0.1        | 0R1      | A9      | A, B       | 3.3        | 3R3      | N0      | A, B, C, D    | 30         | 300      | M1      | F, G, J, K, M |
| 0.2        | 0R2      | H9      | A, B       | 3.6        | 3R6      | P0      | A, B, C, D    | 33         | 330      | N1      | F, G, J, K, M |
| 0.3        | 0R3      | M9      | A, B, C    | 3.9        | 3R9      | Q0      | A, B, C, D    | 36         | 360      | P1      | F, G, J, K, M |
| 0.4        | 0R4      | d9      | A, B, C    | 4.3        | 4R3      | R0      | A, B, C, D    | 39         | 390      | Q1      | F, G, J, K, M |
| 0.5        | 0R5      | f9      | A, B, C    | 4.7        | 4R7      | S0      | A, B, C, D    | 43         | 430      | R1      | F, G, J, K, M |
| 0.6        | 0R6      | m9      | A, B, C    | 5.1        | 5R1      | T0      | A, B, C, D    | 47         | 470      | S1      | F, G, J, K, M |
| 0.7        | 0R7      | n9      | A, B, C    | 5.6        | 5R6      | U0      | A, B, C, D    | 51         | 510      | T1      | F, G, J, K, M |
| 0.8        | 0R8      | t9      | A, B, C    | 6.2        | 6R2      | V0      | A, B, C, D    | 56         | 560      | U1      | F, G, J, K, M |
| 0.9        | 0R9      | y9      | A, B, C    | 6.8        | 6R8      | W0      | B, C, J, K    | 62         | 620      | V1      | F, G, J, K, M |
| 1.0        | 1R0      | A0      | A, B, C, D | 7.5        | 7R5      | X0      | B, C, J, K    | 68         | 680      | W1      | F, G, J, K, M |
| 1.1        | 1R1      | B0      | A, B, C, D | 8.2        | 8R2      | Y0      | B, C, J, K    | 75         | 750      | X1      | F, G, J, K, M |
| 1.2        | 1R2      | C0      | A, B, C, D | 9.1        | 9R1      | Z0      | B, C, J, K    | 82         | 820      | Y1      | F, G, J, K, M |
| 1.3        | 1R3      | D0      | A, B, C, D | 10         | 100      | A1      | F, G, J, K, M | 91         | 910      | Z1      | F, G, J, K, M |
| 1.5        | 1R5      | E0      | A, B, C, D | 11         | 110      | B1      | F, G, J, K, M | 100        | 101      | A2      | F, G, J, K, M |
| 1.6        | 1R6      | F0      | A, B, C, D | 12         | 120      | C1      | F, G, J, K, M | 110        | 111      | B2      | F, G, J, K, M |
| 1.8        | 1R8      | G0      | A, B, C, D | 15         | 150      | E1      | F, G, J, K, M | 120        | 121      | C2      | F, G, J, K, M |
| 2.0        | 2R0      | H0      | A, B, C, D | 18         | 180      | G1      | F, G, J, K, M | 150        | 151      | E2      | F, G, J, K, M |
| 2.2        | 2R2      | J0      | A, B, C, D | 20         | 200      | H1      | F, G, J, K, M | 180        | 181      | G2      | F, G, J, K, M |
| 2.4        | 2R4      | K0      | A, B, C, D | 22         | 220      | J1      | F, G, J, K, M | 200        | 201      | H2      | F, G, J, K, M |
| 2.7        | 2R7      | L0      | A, B, C, D | 24         | 240      | K1      | F, G, J, K, M | 220        | 221      | J2      | F, G, J, K, M |
| 3.0        | 3R0      | M0      | A, B, C, D | 27         | 270      | L1      | F, G, J, K, M | 240        | 241      | K2      | F, G, J, K, M |

\*Non-standard values and custom tolerances are available upon request.

## ATC Part Number Code



\*4,000 pieces on 7" reel and 500 pieces on prototype reel. Consult ATC for other options.

The above part number refers to a 600F Series (case size F) 10 pF capacitor, J tolerance (±5%), 250 WVDC, with T termination (Tin Plated over Nickel Barrier, RoHS Compliant), Laser Marking and Tape and Reel packaging.

\*\*Marking is optional.

ATC accepts orders for our parts using designations **with** or **without** the "ATC" prefix. Both methods of defining the part number are equivalent, i.e., part numbers referenced with the "ATC" prefix are interchangeable to parts referenced without the "ATC" prefix. Customers are free to use either in specifying or procuring parts from American Technical Ceramics.

For additional information and catalogs contact your ATC representative or call direct at (631) 622-4700.

Consult factory for 500 piece reels for prototyping.

Consult factory for additional performance data.

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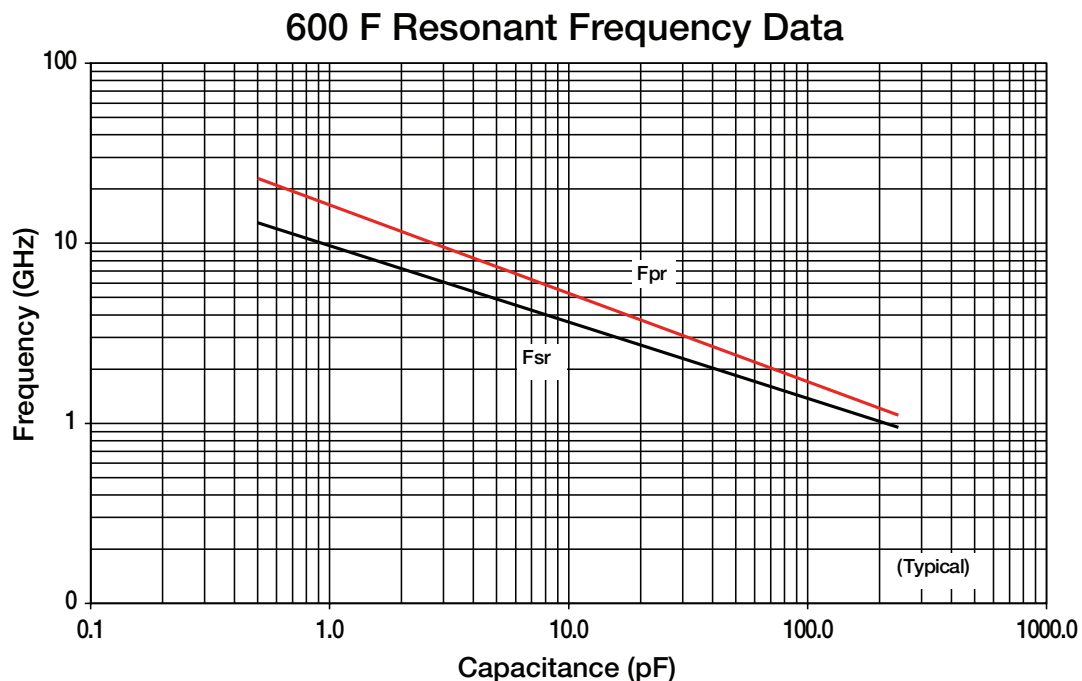
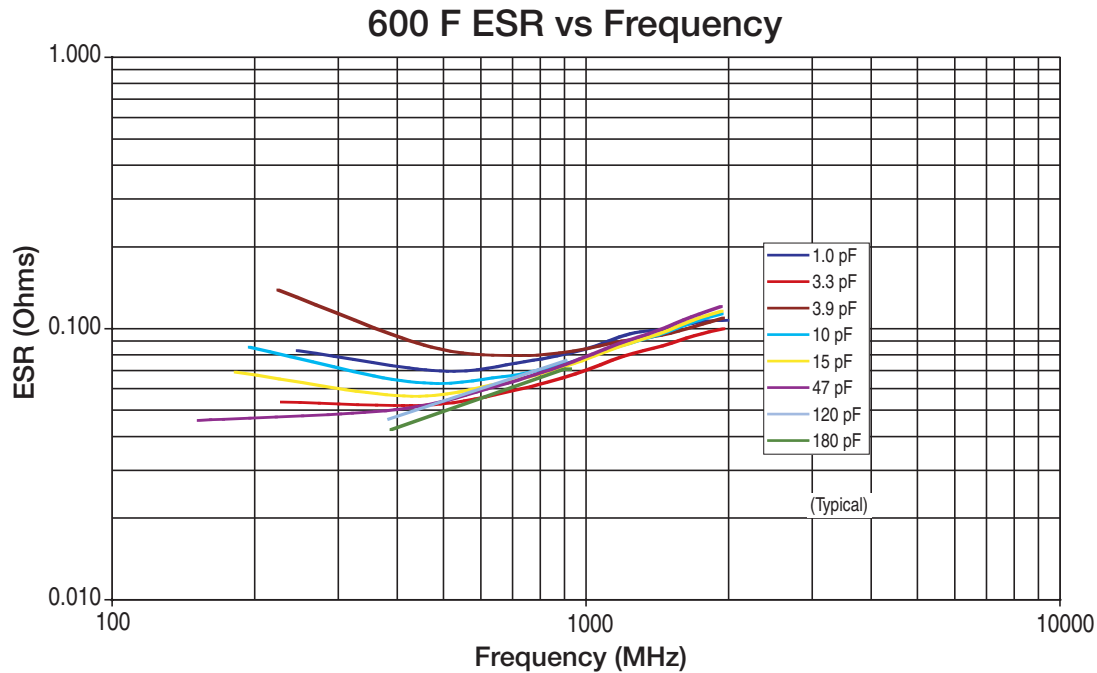
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# ATC 600F Series Ultra-Low ESR, High Q NPO RF & Microwave Capacitors



## ATC 600F Series Data Sheet Test Condition Description

Capacitors horizontally mounted on 23.3-mil thick Rogers RO4350<sup>®</sup> softboard, 52-mil wide, 1/2 oz. Cu traces.

**FSR** = lowest frequency at which S11 response, referenced at capacitor edge, crosses real axis on Smith Chart.

**FPR** = lowest frequency at which there is a notch in S21 magnitude response.

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# ATC 600F Series Ultra-Low ESR, High Q NPO RF & Microwave Capacitors

## Outline Dimensions

|             |                                                                                 |                                                          |
|-------------|---------------------------------------------------------------------------------|----------------------------------------------------------|
|             | <b>F (0805)</b><br>L: .079 ± .008 (2.01 ± 0.20)<br>W: .049 ± .008 (1.24 ± 0.20) | T: .051 max. (1.30 max.)<br>Y: .020 ± 0.01 (0.51 ± 0.25) |
| Inches (mm) |                                                                                 |                                                          |

## Suggested Mounting Pad Dimensions

| <p>Horizontal Electrode Orientation</p> <p>Vertical Electrode Orientation</p> |                 | Case Sizes L, S and F |                 |                 |             |  |
|-------------------------------------------------------------------------------|-----------------|-----------------------|-----------------|-----------------|-------------|--|
| Case Size                                                                     | A Min.          | B Min.                | C Min.          | D Min.          |             |  |
| 0402 (1005)                                                                   | .0275<br>(0.70) | .0354<br>(0.90)       | .0157<br>(0.40) | .0866<br>(2.20) |             |  |
| 0603 (1608)                                                                   | .0393<br>(1.00) | .0433<br>(1.10)       | .0236<br>(0.60) | .110<br>(2.80)  |             |  |
| 0805 (2012)                                                                   | .0590<br>(1.50) | .0512<br>(1.30)       | .0236<br>(0.60) | .1259<br>(3.20) |             |  |
|                                                                               |                 |                       |                 |                 | Inches (mm) |  |

## Design Kits Each Kit contains a selection of standard capacitor values for circuit prototyping.

| Kit #   | Item #      | Description                                                                                           | Cap. Value Range (pF) | Cap. Values (pF)                                                | Tol. (pF) | Price   |
|---------|-------------|-------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------|-----------|---------|
| Kit 32T | DK0032T<br> | 600F Series Ultra-low ESR, High Q Microwave Capacitors<br>16 different values, 15 pcs. min. per value | 0.1 to 2.0            | 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.5 | ±0.1      | \$90.00 |
|         |             |                                                                                                       |                       | 1.6, 1.8, 2.0                                                   | ±0.25     |         |
| Kit 33T | DK0033T<br> | 600F Series Ultra-low ESR, High Q Microwave Capacitors<br>16 different values, 15 pcs. min. per value | 1.0 to 10             | 1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3                | ±0.1      | \$90.00 |
|         |             |                                                                                                       |                       | 3.9, 4.7, 5.6, 6.8, 8.2                                         | ±0.25     |         |
|         |             |                                                                                                       |                       | 10                                                              | ±5%       |         |
| Kit 34T | DK0034T<br> | 600F Series Ultra-low ESR, High Q Microwave Capacitors<br>16 different values, 15 pcs. min. per value | 10 to 100             | 10, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 47, 56, 68, 82, 100 | ±5%       | \$90.00 |
| Kit 35T | DK0035T<br> | 600F Series Ultra-low ESR, High Q Microwave Capacitors<br>7 different values, 15 pcs. min. per value  | 100 to 240            | 100, 120, 150, 180, 200, 220, 240                               | ±5%       | \$50.00 |

For Online Kit Orders, Catalog & Application Notes, Visit: [www.atceramics.com](http://www.atceramics.com)

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