

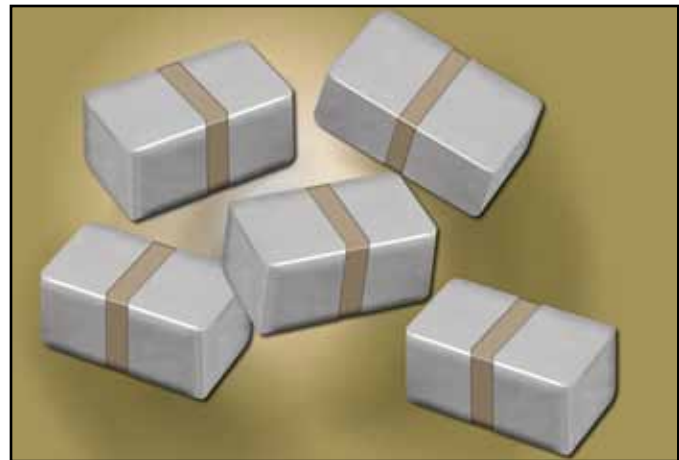
## ATC 550S Series UBC™ Ultra-Broadband Capacitor

### Features:

- EIA 0603 Case Size
- Capacitance: 100 nF
- Operating Frequency:  
16 KHz (-3 dB roll-off) to 40+ GHz\*
- Insertion Loss: < 1 dB typical
- Orientation Insensitive
- One Piece Construction
- Voltage Rating: 50 WVDC
- RoHS Compliant Terminations

ATC's new 550S Ultra-Broadband Capacitor is manufactured with highest quality materials to provide reliable and repeatable Ultra-Broadband performance from 16 KHz through 40+ GHz. It exhibits low insertion loss, flat frequency response and excellent return loss, and is ideal for D.C. Blocking, Coupling, Bypassing and Feedback applications requiring Ultra-Broadband performance.

The 550S is a one-piece orientation-insensitive 0603 SMT package, fully compatible with high speed automated pick-and-place manufacturing. It is designed to meet the most stringent requirements of Ultra-Broadband applications.

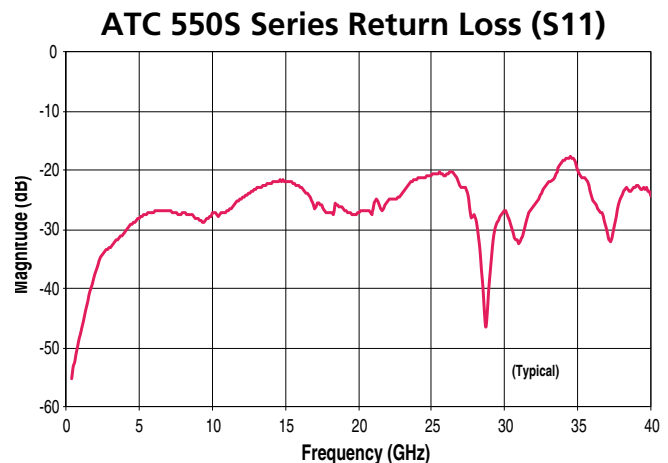
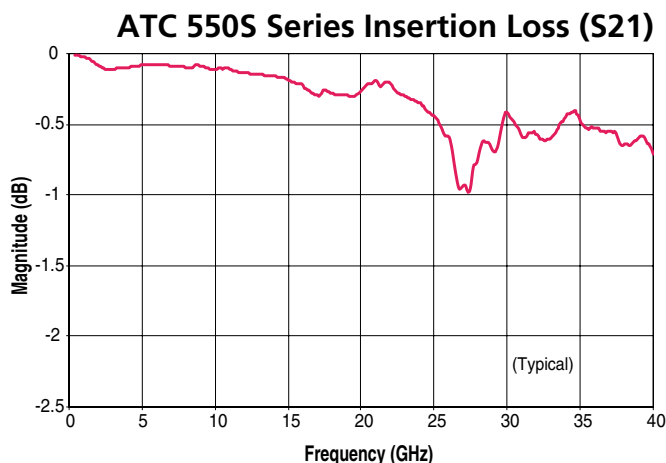


### Advantages:

- Ultra-Broadband Performance
  - Low Insertion Loss
  - Flat Frequency Response
  - Excellent Return Loss
  - Unit-to-Unit Performance Repeatability
  - Rugged Ceramic Construction
- \* 25 °C, no bias applied

### Applications:

- Optoelectronics/ High Speed Data
  - Transimpedance amplifiers
  - ROSA/TOSA†
  - SONET††
  - Broadband Test Equipment
  - Broadband Microwave/ millimeter-wave
- † Receive and Transmit Optical Sub-Assembly  
†† Synchronous Optical Network



### ATC 550S Data Sheet Test Condition Description

ATC testing to 40 GHz performed on 13.3-mil-thick Rogers RO4350 microstrip board, with the device under test subtending a 36 mil gap in a 30-mil-wide center trace (nominal 50-ohm characteristic impedance).



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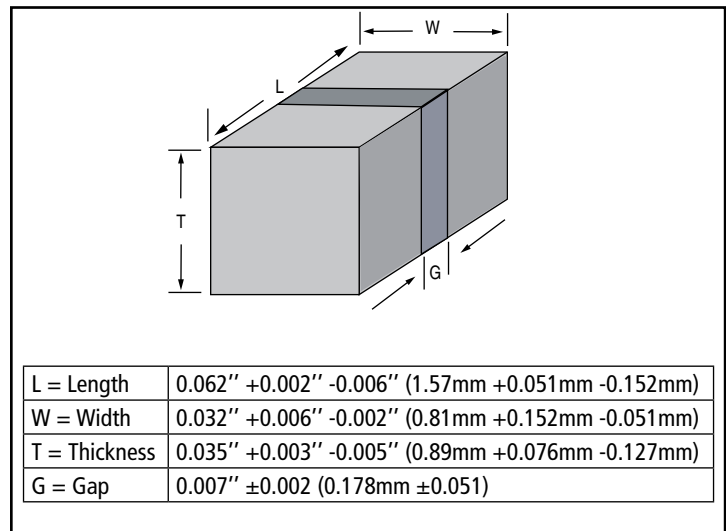
ATC # 001-1128  
Rev. C; 5/14

# ATC 550S SERIES UBC™ CAPACITORS

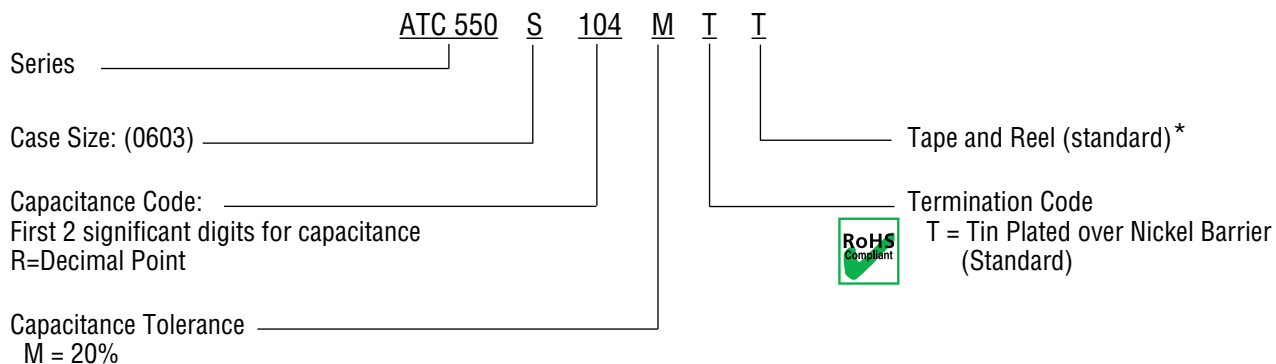
## Electrical Specifications:

- Capacitance: 100 nF
- Rated Voltage: 50 WVDC
- Dielectric Withstanding Voltage (DWV): 250% of rated WVDC for 5 secs.
- Operating Temperature Range: -55°C to +125°C
- Temperature Coefficient of Capacitance (TCC): ±15% (-55°C to +125°C)
- Insulation Resistance: 10<sup>10</sup> Ω min. @ +25°C @ rated WVDC  
10<sup>9</sup> Ω min. @ +125°C @ rated WVDC

## Mechanical Dimensions



## ATC PART NUMBER CODE



\*500, 1000, 4000 pieces on 7" reel

The above part number refers to a 550 Series (case size S) 100 nF capacitor, M tolerance (±20%), with T termination (Tin Plated over Nickel Barrier), tape and reel packaging.

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 (+1-631) 622-4700.

Consult factory for additional performance data.

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ATC # 001-1128 Rev. C; 5/14



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