

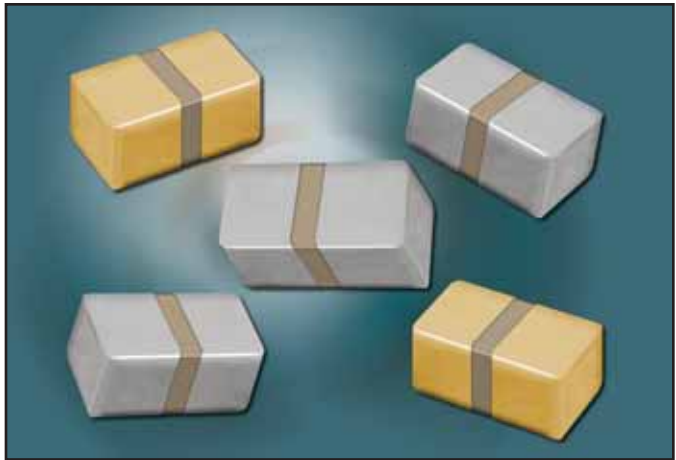
ATC 550L Series UBC™ Ultra-Broadband Capacitor

Features:

- EIA 0402 Case Size
- Capacitance: 100 nF
- Operating Frequency: 16 KHz (-3 dB roll-off) to 40+ GHz*
- Insertion Loss: < 0.5 dB typical
- Orientation Insensitive
- One Piece Construction
- Voltage Rating: 16 WVDC**
- RoHS Compliant Terminations
- Gold Terminations Available

ATC's new 550L 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 ultra-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 550L is a one-piece orientation-insensitive 0402 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.



Patented Design

Advantages:

- Ultra-Broadband Performance
- Ultra-Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss
- Unit-to-Unit Performance Repeatability
- Rugged Ceramic Construction

* 25 °C, no bias applied

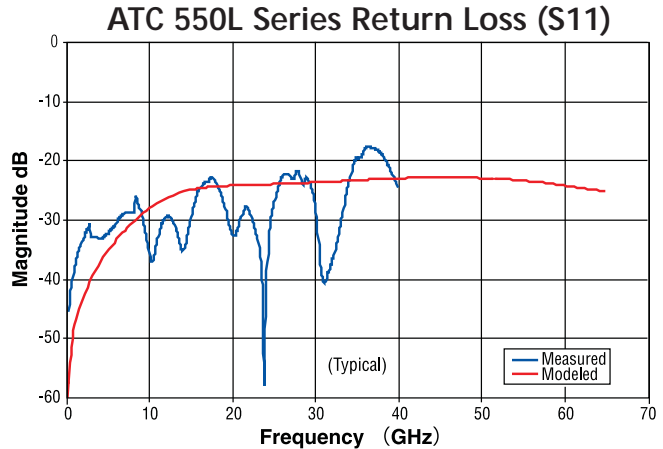
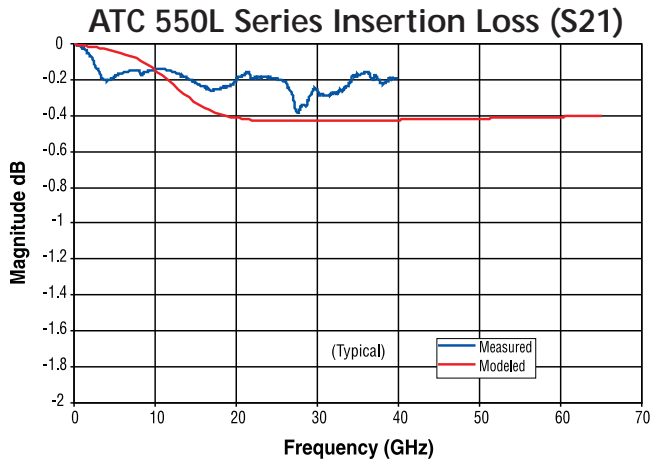
** Operating Temperature dependent

Applications:

- Optoelectronics/ High Speed Data
- Transimpedance amplifiers
- ROSA/TOSA†
- SONENT††
- Broadband Test Equipment
- Broadband Microwave/ millimeter-wave

† Receive and Transmit Optical Sub-Assembly

†† Synchronous Optical Network



ATC 550L Data Sheet Test Condition Description

ATC testing to 40 GHz performed on 10-mil-thick Rogers RO4350 microstrip board, with the device under test subtending a 24 mil gap in a 22-mil-wide center trace (nominal 50-ohm characteristic impedance). Modelithics model developed through testing on several different substrates, including 5-mil-thick Alumina measured through 65 GHz. The modeled results presented for RO4350 were for a pad width of 20 mils and a gap of 16 mils.



Modeled data by
Modelithics Corp.



AMERICAN TECHNICAL CERAMICS

ATC North America
+1-631-622-4700
sales@atceramics.com

ATC Europe
+46 8 6800410
sales@atceramics-europe.com

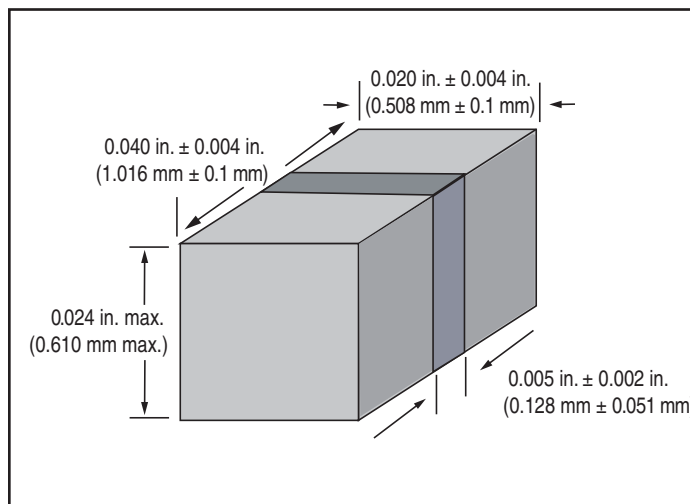
ATC Asia
+86-755-2386-8759
sales@atceramics-asia.com



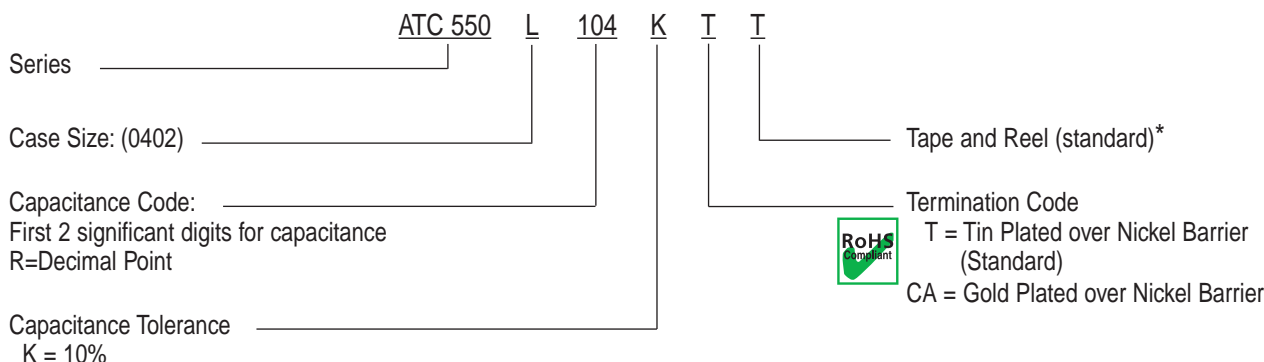
Electrical Specifications:

- Capacitance: 100 nF
- Rated Voltage:
 - 16 WVDC from -55°C to +85°C
 - 10 WVDC from -55°C to +125°C
- 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 +85°C), 16 WVDC
 - ±15% (-55°C to +125°C), 10 WVDC
- Insulation Resistance:
 - 10⁸ Ω min. @ +25°C @ rated WVDC
 - 10⁷ Ω min. @ +125°C @ rated WVDC

Mechanical Dimensions



ATC PART NUMBER CODE



*1000 pieces on 7" reel. Consult factory for other quantities.

The above part number refers to a 550 Series (case size L) 100 nF capacitor, K tolerance (±10%), 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.

Sales of ATC products are subject to the terms and conditions contained in American Technical Ceramics Corp. Terms and Conditions of Sale (ATC document #001-992 Rev. A 10/03). Copies of these terms and conditions will be provided upon request. They may also be viewed on ATC's website at www.atceramics.com/productfinder/default.asp. Click on the link for Terms and Conditions of Sale.

ATC has made every effort to have this information as accurate as possible. However, no responsibility is assumed by ATC for its use, nor for any infringements of rights of third parties which may result from its use. ATC reserves the right to revise the content or modify its product line without prior notice.

© 2009 American Technical Ceramics Corp. All Rights Reserved.

ATC # 001-1066 Rev. F; 10/11



AMERICAN TECHNICAL CERAMICS
ATC North America
 +1-631-622-4700
sales@atceramics.com

ATC Europe
 +46 8 6800410
sales@atceramics-europe.com

ATC Asia
 +86-755-2386-8759
sales@atceramics-asia.com

