ATC 560L 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: < 0.6 dB typical
- Orientation Insensitive
- One Piece Construction
- Voltage Rating: 16 WVDC**
- RoHS Compliant Terminations
- Gold Terminations Available

ATC’s new 560L 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 560L 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.

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†
- SONET††
- Broadband Test Equipment
- Broadband Microwave/millimeter-wave
† Receive and Transmit Optical Sub-Assembly
†† Synchronous Optical Network

ATC 560L 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).
**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)
  - ±22% (>85°C to +125°C)
- Insulation Resistance:
  - $10^{10}$ Ω min. @ +25°C @ rated WVDC
  - $10^9$ Ω min. @ +125°C @ rated WVDC

**Mechanical Dimensions**

ATC PART NUMBER CODE

<table>
<thead>
<tr>
<th>Series</th>
<th>ATC 560</th>
<th>L</th>
<th>104</th>
<th>Y</th>
<th>T</th>
<th>T</th>
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Case Size: (0402)

First 2 significant digits for capacitance

R = Decimal Point

Y = +25%, -20%

*500, 1000, 4000 pieces on 7” reel

The above part number refers to a 560 Series (case size L) 100 nF capacitor,
Y tolerance (+25%, -20%), with T termination (Tin Plated over Nickel Barrier), tape and reel packaging.

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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