ATC 550Z Series UBC™
Ultra-Broadband Capacitor

Features:
- EIA 0201 Case Size
- Capacitance: 10 nF min.
- Operating Frequency:
  160 KHz (-3 dB roll-off) to 40+ GHz*
- Insertion Loss: < 0.4 dB typical
- Orientation Insensitive
- One Piece Construction
- Voltage Rating: 10 WVDC**
- RoHS Compliant Terminations

ATC’s new 550Z Ultra-Broadband Capacitor is manufactured with highest quality materials to provide reliable and repeatable Ultra-Broadband performance from 160 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 550Z is a one-piece orientation-insensitive 0201 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

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

All testing performed on 10-mil-thick Rogers RO3006 microstrip board, with the device under test subtending a 10 mil gap in a 13.4-mil-wide center trace (nominal 50-ohm characteristic impedance).
Electrical Specifications:
- Capacitance: 10 nF min.
- Rated Voltages:
  6.3 WVDC from -55°C to +125°C
  10 WVDC from -55°C to +85°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):
  ±22% (-55°C to +125°C)
  ±15% (-55°C to +85°C)
- Maximum DF: 5% @ 1KHz
- Insulation Resistance:
  $10^8 \Omega$ min. @ +25°C @ rated WVDC
  $10^7 \Omega$ min. @ +125°C @ rated WVDC

Mechanical Dimensions

ATC PART NUMBER CODE

Series ATC 550
Case Size: (0201) Tape and Reel (standard)*
Capacitance Code:
First 2 significant digits for capacitance
R=Decimal Point
Capacitance Tolerance
P = +100%, -0%

Termination Code
T = Tin Plated over Nickel Barrier (Standard)

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

The above part number refers to a 550 Series (case size Z) 10 nF capacitor, P tolerance,
with T termination (Tin Plated over Nickel Barrier), tape and reel packaging.

For other terminations please consult factory.

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 PART NUMBER CODE

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