

ATC 531Z Broadband Multilayer Capacitors

Features:

- EIA 0201 Case Size
- Capacitance: 100 nF
- Operating Frequency: 16 KHz to 30 GHz
- Insertion Loss: < 0.5 dB typ.
- Low Loss X5R Dielectric
- Voltage Rating: 16 WVDC
- Solderable SMT Terminations
- RoHS Compliant Terminations

ATC's new 531Z Series Multilayer Broadband Capacitor provides low insertion loss performance over multiple octaves of frequency spectrum. The 531Z capacitor is compatible with high speed automated pick and place SMT manufacturing.

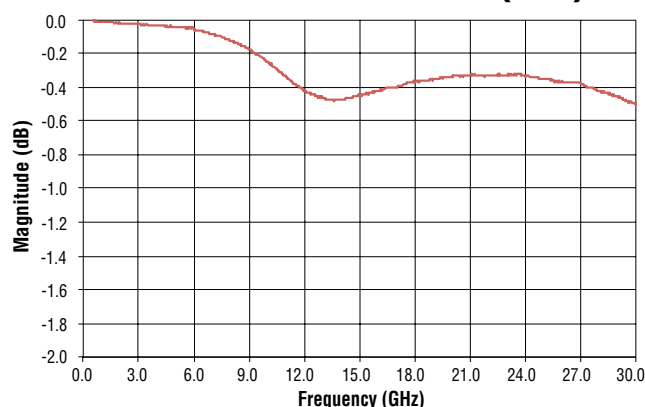
The 531Z is ideal for broadband DC blocking, coupling, bypassing, and feedback applications in optical communications systems and equipment using high-speed digital logic.



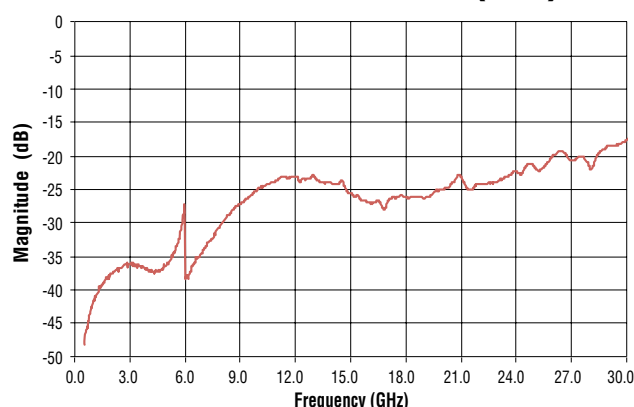
Advantages:

- Broadband Performance
- Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss through 30 GHz
- Unit-to-Unit Performance Repeatability
- Rugged Ceramic Construction

531Z Insertion Loss (S21)



531Z Return Loss (S11)



ATC 531Z Data Sheet Test Condition Description

All testing performed on 10-mil-thick Rogers RO3006 microstrip board, with the UUT subtending a 10 mil gap in a 14.2-mil-wide center trace (nominal 50-ohm characteristic impedance). Measurements were made using an Anritsu 3680K Universal Test Fixture and an Anritsu 37269D Vector Network Analyzer having a four-receiver architecture. Measurements have been de-embedded to the edges of the UUT using a standard TRL calibration procedure.



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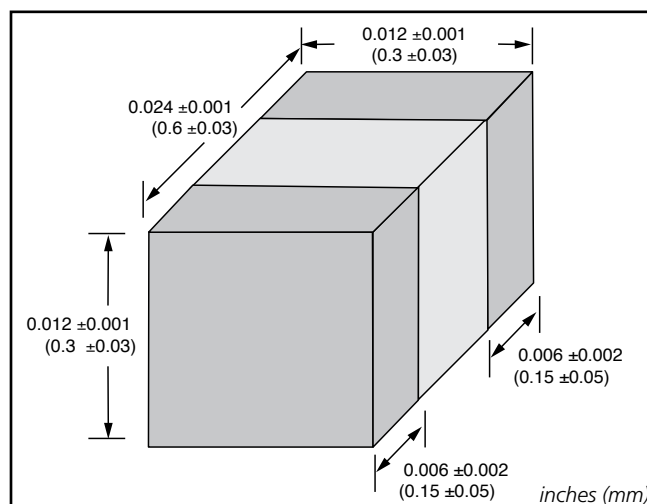
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ATC 531Z BROADBAND MULTILAYER CAPACITORS

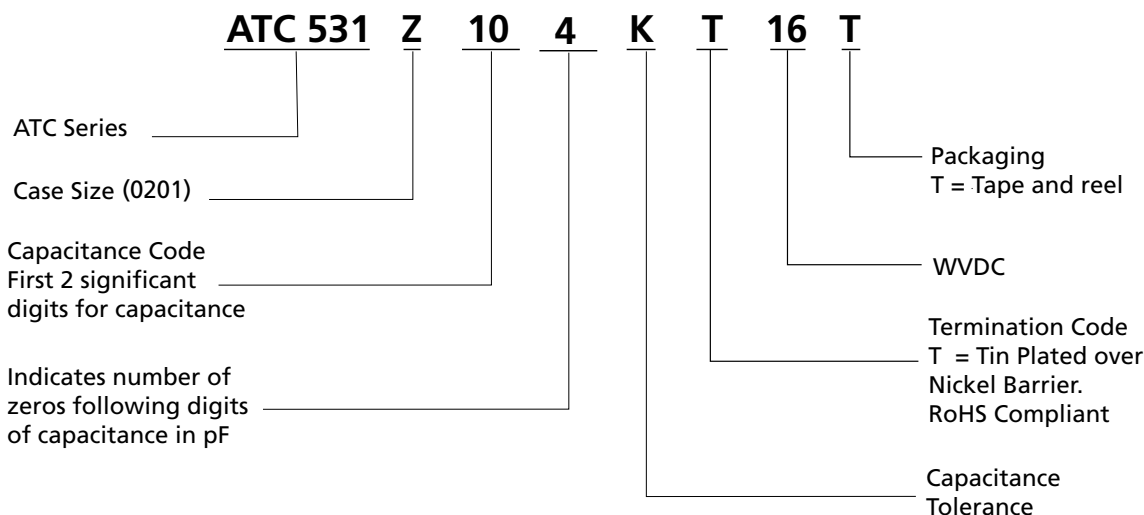
Electrical Specifications:

- Capacitance: 100 nF
- Rated Voltage: 16 WVDC
- Dielectric Withstanding Voltage (DWV): 250% of rated WVDC for 5 secs.
- Operating Temperature Range: -55°C to +85°C
- Temperature Coefficient of Capacitance (TCC): $\pm 15\%$ (-55°C to +85°C)
- Maximum DF: 15% @ 1KHz
- Insulation Resistance:
10⁸ Ω min. @ +25°C @ rated WVDC
10⁷ Ω min. @ +85°C @ rated WVDC

Mechanical Dimensions



ATC 531 Series Part Number Code



The above part number refers to a 531 Series (case size Z) 100 nF capacitor, K tolerance ($\pm 10\%$), with T termination (tin plated over nickel barrier, RoHS compliant), 16 WVDC, 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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