

GENERAL DESCRIPTION

KYOCERA AVX new 550U Ultra-Broadband Capacitor is manufactured with highest quality materials to provide reliable and repeatable Ultra-Broadband performance from 16KHz through 70+ 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 550U is a one-piece 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

TYPICAL CIRCUIT APPLICATIONS

- Optoelectronics/High Speed Data
- Transimpedance amplifiers
- Receive and Transmit Optical Sub-Assembly (ROSA/TOSA)
- Synchronous Optical Network (SONET)
- Broadband test equipment
- Broadband Microwave/Millimeter Wave

FEATURES

- 0201* Case Size
- Capacitance: 100 nF
- Operating Frequency: 16 KHz (-3 dB roll-off) to 70+ GHz**
- Insertion Loss: 0.4 dB typical
- One Piece Construction
- Voltage Rating: 6.3 WVDC
- RoHS Compliant Terminations
- Gold Termination Available

* Please see Mechanical Dimensions section for exact dimensions

** 25°C, no bias applied

ELECTRICAL SPECIFICATIONS

Capacitance	100 nF
Rated Voltage	6.3 WVDC
Dielectric Withstanding Voltage	250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +85°C
Temperature Coefficient of Capacitance	±15%
Insulation Resistance	10 ¹⁰ Ω min. @ +25°C @ rated WVDC 10 ⁹ Ω min. @ +85°C @ rated WVDC

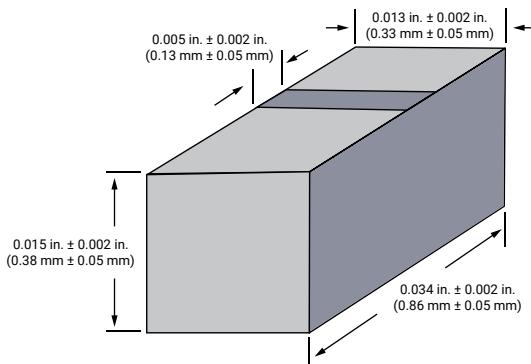
PACKAGING OPTIONS



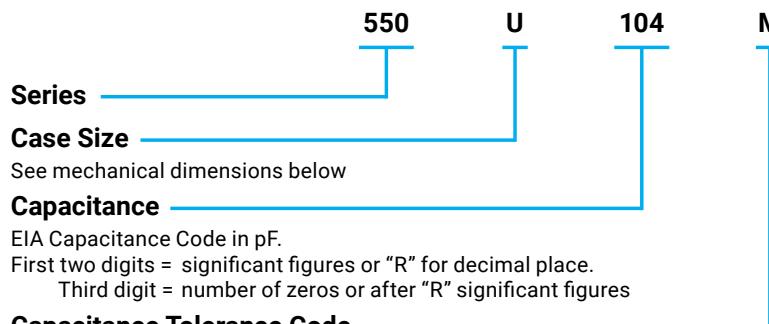
Tape & Reel



MECHANICAL DIMENSIONS



HOW TO ORDER



Packaging

T = Tape and Reel, 1000 pc qty.
T\500 = Tape and Reel, 500 pc qty

Termination Style Code

T = Tin Plated over Nickel Barrier (Standard)
CA = Gold Plated over Nickel Barrier

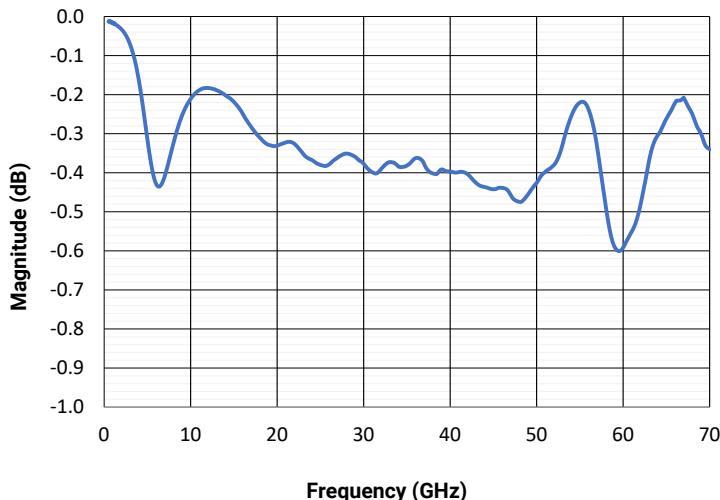
Capacitance Tolerance Code

Code	M
Tol.	±20%

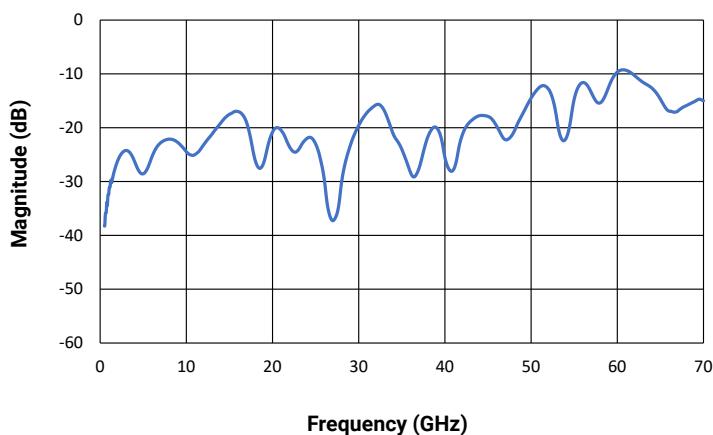
The above part number refers to a 550 Series (case size U) 100 nF capacitor, M tolerance ($\pm 20\%$), with T termination (Tin Plated over Nickel Barrier), tape and reel packaging, 4000 pc qty.

PERFORMANCE DATA

550U Series Insertion Loss (S21)



550U Series Return Loss (S11)



550U DATA SHEET TEST CONDITION DESCRIPTION

KYOCERA AVX testing to 70 GHz performed on 10-mil-thick Rogers RO3006 microstrip broad, with the device under test subtending a 10 mil gap in a 13.4-mil-wide center trace (nominal 50-ohm characteristic impedance).