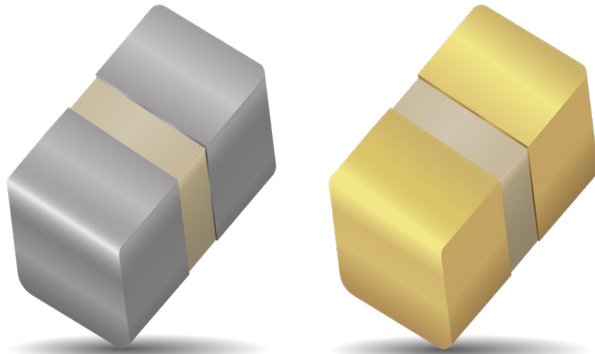# RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)
550L Series UBC™ Ultra-Broadband Capacitor

GENERAL DESCRIPTION

AVX's new 550L Ultra-Broadband Capacitor is manufactured with highest quality materials to provide reliable and repeatable Ultra-Broadband performance from 16 KHz 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 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.

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

- 0402 Case Size
- Capacitance: 100 nF
- Operating Frequency: 16 KHz (-3 dB roll-off) to 70+ GHz*
- Insertion Loss: <0.5 dB typical
- Orientation-insensitive
- One Piece Construction
- Voltage Rating: 16 WVDC**
- RoHS Compliant Terminations
- Gold Termination Available

  * 25°C, no bias applied
  ** Operating Temperature Dependent

ELECTRICAL SPECIFICATIONS

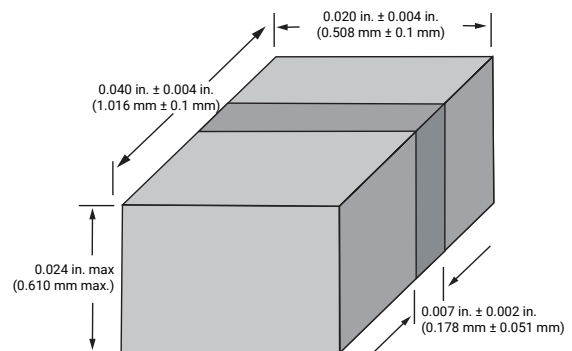|	
Capacitance	100 nF
Rated Voltage	16 WVDC from -55°C to +85°C 10 WVDC from -55°C to +125°C
Dielectric Withstanding Voltage	250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient of Capacitance	±15% (-55°C to +85°C), 16 WVDC ±22% (-55°C to +125°C), 10 WVDC
Insulation Resistance	10^8 Ω min. @ +25°C @ rated WVDC 10^7 Ω min. @ +125°C @ rated WVDC

PACKAGING OPTIONS

Tape & Reel

RoHS COMPLIANT

MECHANICAL DIMENSIONS

0.020 in. ± 0.004 in.
(0.508 mm ± 0.1 mm)

0.040 in. ± 0.004 in.
(1.016 mm ± 0.1 mm)

0.024 in. max
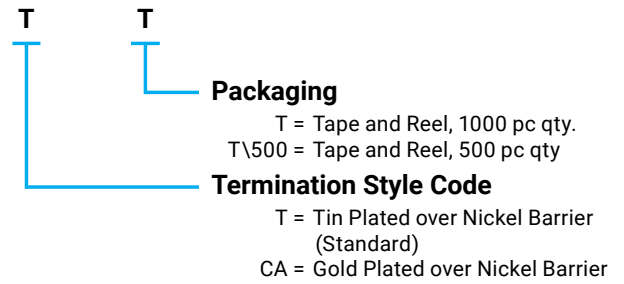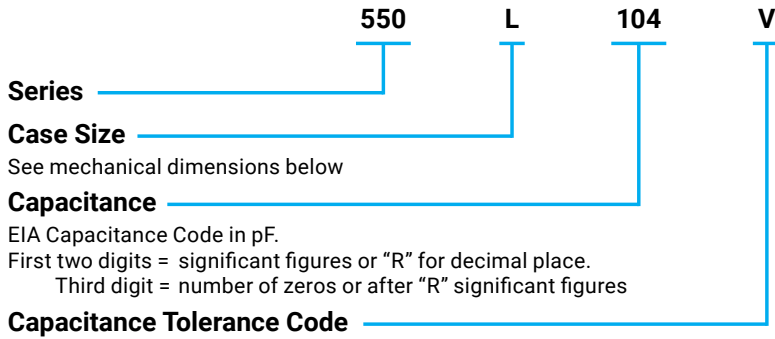(0.610 mm max.)

0.007 in. ± 0.002 in.
(0.178 mm ± 0.051 mm)

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)
550L Series UBC™ Ultra-Broadband Capacitor

HOW TO ORDER

550   L   104   V   T   T

Series

Case Size
See mechanical dimensions below

Capacitance
EIA Capacitance Code in pF.
First two digits = significant figures or "R" for decimal place.
        Third digit = number of zeros or after "R" significant figures

Capacitance Tolerance Code
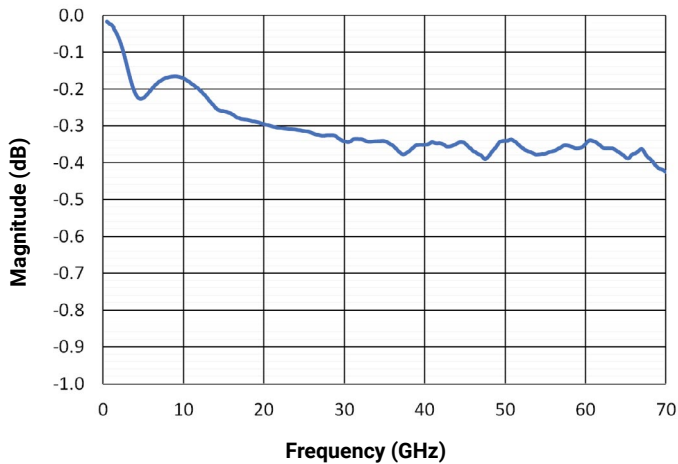
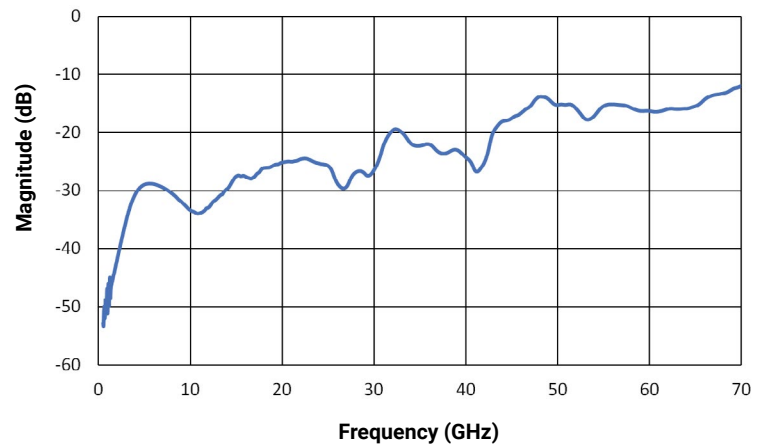| Code	K	V
Tol.	±10%	+ 20% -10%

The above part number refers to a 550 Series (case size L) 100 nF capacitor,
V Tolerance (+ 20% -10%), with T termination (Tin Plated over Nickel Barrier), tape and reel packaging.

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

PERFORMANCE DATA

550L Series Insertion Loss (S21)

550L Series Return Loss (S11)

AVX 550L Data Sheet Condition Description

The S-Parameter test was performed on Rogers RO4350B 10-mil thick substrate with a nominal impedance of 50 ohms. the board has a 10-mil gap at the center of a 22-mil wide ½ oz copper microstrip trace

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Silicon RF Capacitors / Thin Film *category:*

Click to view products by Kyocera AVX *manufacturer:*

Other Similar products are found below :

MA4M3050 MA4M3100 MA4M3010 MV0204CA1R0MQAW MV0802CA150MAAW MV0804CA1R0MABW MV3204CA150MABW

02013J3R0ABSTR 02015J1R2ABSTR 04021JR05Z4STR\500 400Z0R1AT100T 400Z0R1PT100T 400Z100FT16T 400Z150FT16T

400Z170FT16T 400Z180FT16T 400Z1R8QT25T 400Z2R0QT25T 400Z2R4QT25T 400Z3R0AT25T 400Z4R7AT25T 400Z5R6BT25T

400Z8R2BT16T 04023J4R6ABSTR 02013J1R8PBSTR 02015J0R9PBSTR 02015J1R0PBSTR 0201ZK8R2BBWTR 04021JR65PBSTR

04021J0R4ZBSTR\500 04023J0R6PBSTR\500 04021J1R4PBSTR\500 02011JR25ZBSTR\500 02015J1R5PBSTR\500

04025J2R2QBWTR\500 06035J2R2QBSTR 06033J6R8BBSTR 04023J5R6ABSTR 100B300GT500XT 100B1R0CT500XT

02015J2R0PBSTR\500 100B470GT500XT 700B271JT200XT 100B5R1DT500XT 100B0R6DT500XT 100B160FT500XT

100B3R3DT500XT 100B180FT500XT 100B2R0DT500XT 04021J0R8P4STR\500