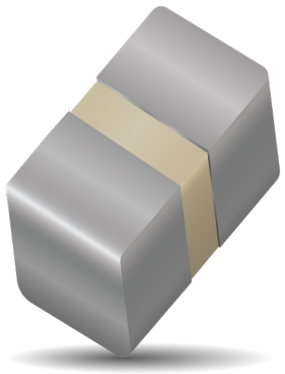
THE DATASHEET OF

520L103KT16T

RF/Microwave Capacitors
RF/Microwave Multilayer Capacitors (MLC)
520L Series Broadband Multilayer Capacitors



UBL TECHNOLOGY

KYOCERA AVX, the industry leader, is introducing the new 520L Series Multilayer Broadband Capacitor. This device provides low insertion loss performance over multiple octaves of frequency spectrum. The 520L capacitor is compatible with high speed automated pick and place SMT manufacturing. The 520L is ideal for broadband DC blocking, coupling, bypassing, and feedback applications in optical communications systems and equipment using high-speed digital logic.

FEATURES

- EIA 0402 Case Size
- Operating Frequency 160 KHz to 16 GHz
- Insertion Loss: 1 dB max.
- Low Loss X7R Dielectric
- Solderable SMT Terminations

ADVANTAGES

- Broadband Performance
- Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss through 16 GHz
- Unit-to-Unit Performance
- Rugged Ceramic Construction

HOW TO ORDER

520	L	10	3	K	T	16	T
Series	**Case Size** 0402	**Capacitance Code** First 2 significant digits for capacitance	Indicates number of zeros following digits of capacitance in pF	**Capacitance Tolerance**	**Termination Code** T = Tin Plated over Nickel Barrier. RoHS Compliant	**WVDC**	**Packaging (Tape and Reel)** T = 500 pcs T1K = 1,000 pcs T10K = 10,000pcs

The above part number refers to a 520 Series (case size L) 10 nF capacitor, K tolerance (±10%), with T termination (tin plated over nickel barrier, RoHS compliant), 16 WVDC, tape and reel packaging.

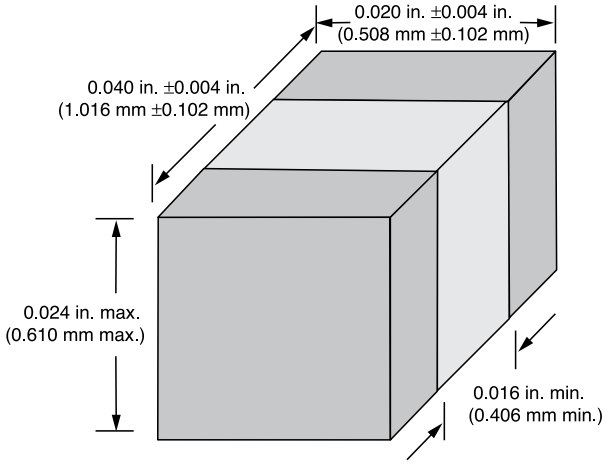
Tape & Reel

RoHS COMPLIANT

LIFE TEST

MIL-STD-202, Method 108, for 2000 hours, @ 125 °C with 200% WVDC applied

DIMENSIONS

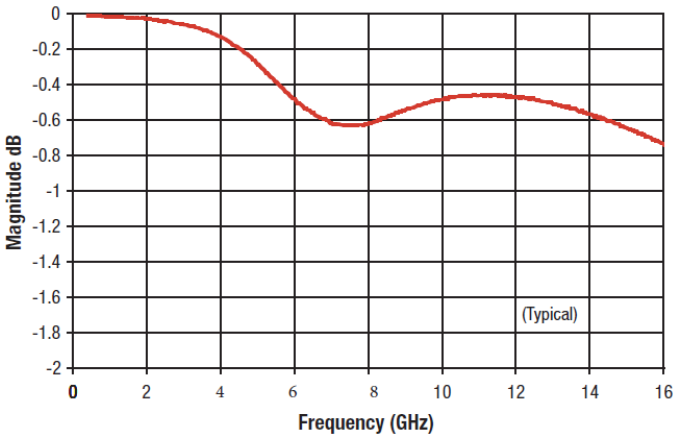


ELECTRICAL SPECIFICATIONS

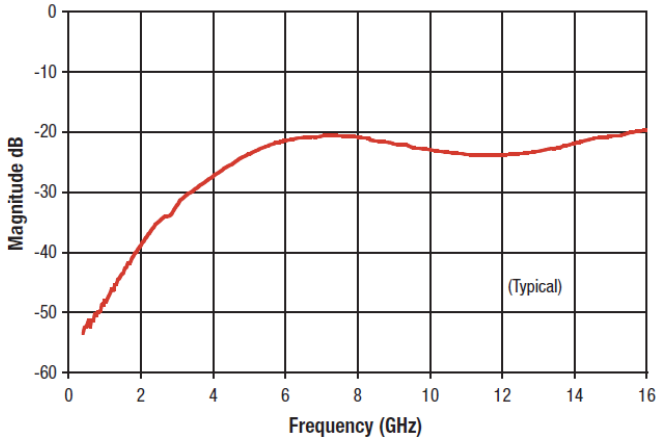
Capacitance	10 nF
Rated Voltage	16 WVDC
Dielectric Withstanding Voltage (DWV)	250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient of Capacitance (TCC)	±15% (-55°C to +125°C)
Maximum DF	3% @ 1KHz
Insulation Resistance	10^{11} Ω min. @ +25°C @ rated WVDC 10^{10} Ω min. @ +125°C @ rated WVDC

PERFORMANCE DATA

520L Insertion Loss (S21)



520L Return Loss (S11)



520L Data Sheet Test Condition Description
All testing performed on 10-mil-thick Rogers RO4350 microstrip board, with the UUT subtending a 24 mil gap in a 22-mil-wide center trace (nominal 50-ohm characteristic impedance). Measurements were made using an Anritsu 3680K Universal Test Fixture and an HP8722D 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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