Ultra-Broadband Inductor
506WLC Series
General Information

UBL TECHNOLOGY
KYOCERA AVX, the industry leader, is introducing the new 506WLC Series High Frequency Ultra-Broadband Inductor (UBL). This unique component** provides low insertion loss and an excellent match over multiple octaves of frequency spectrum. The 506WLC is ideal for ultra-broadband DC decoupling networks and bias tee applications in optical communications systems and equipment using highspeed digital logic.

FEATURES
- Inductance: 2.0 µH, typ.
- Operating Frequency:
  2.3 MHz (-3 dB roll-off) through 40 GHz, typ.
- Insertion Loss (shunt mounted): 0.5 dB, typ.
- Return Loss (shunt mounted): 17 dB, typ.
- Rated Current: 250 mA de. max.*
- DC Resistance: 1.45 Ω, typ. @ 10 mA
- Operating Temperature Range: -40°C to +85°C
- Gold plated leads: 15 - 25 µ in.

ADVANTAGES
- Ultra-Broadband Performance
- Ultra-Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss Through 40 GHz
- Unit-to-Un it Performance Repeatability
- Rugged Powdered Iron Core

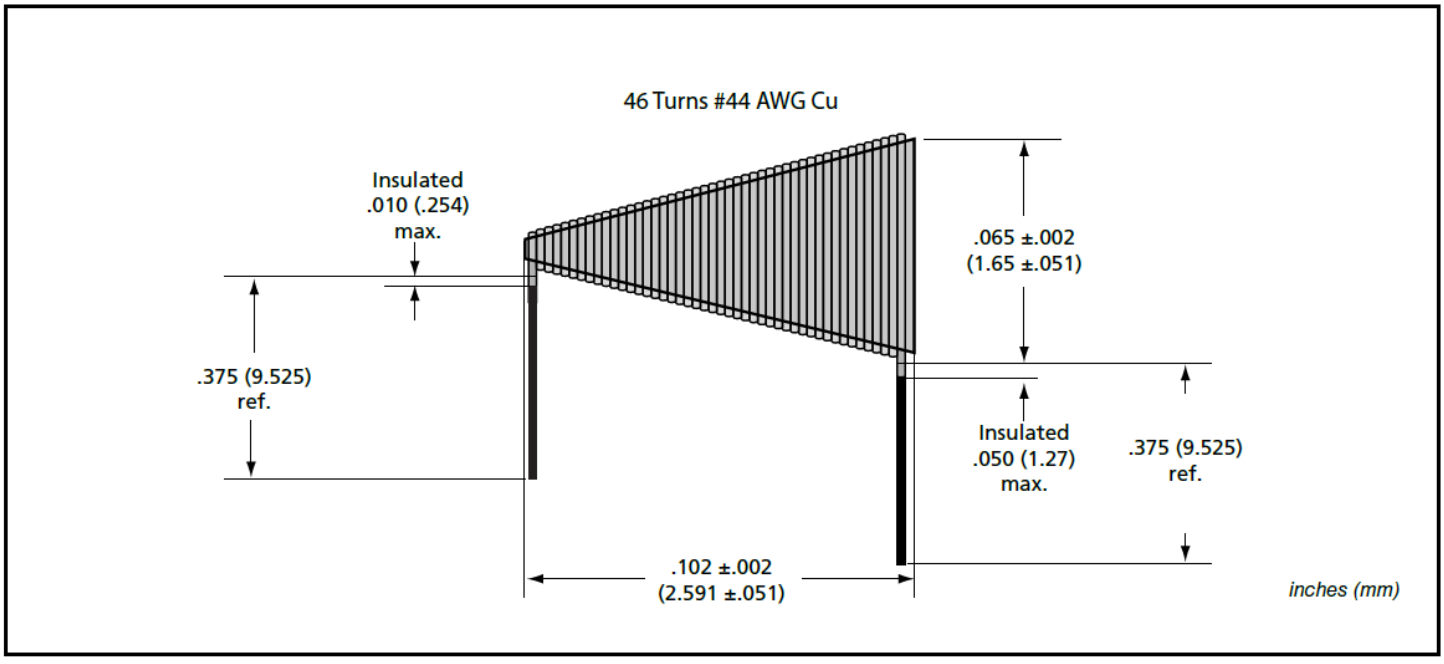
HOW TO ORDER

506WLC	2R0	K	G	250	B
Series	**Inductance Code** First 2 significant digits for inductance R = Decimal Point	**Inductance Tolerance, typ.**	**Gold Plated Leads** G = 15 - 25 µ in.	**Current (mA)**	**Packaging** B = One piece in plastic box

RoHS COMPLIANT

*The above number refers to a 506WLC Series 2.0 µH inductor, K tolerance (±10%, typ.), with Gold Plated Leads, (G), 250 mA. one piece in plastic box.

DIMENSIONS

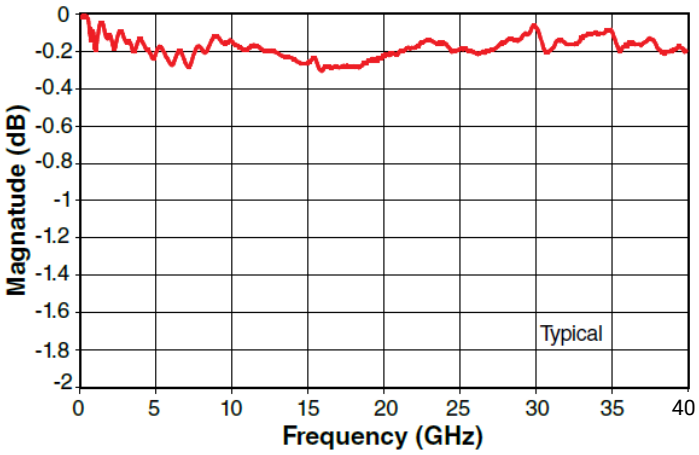


ELECTRICAL CHARACTERISTICS

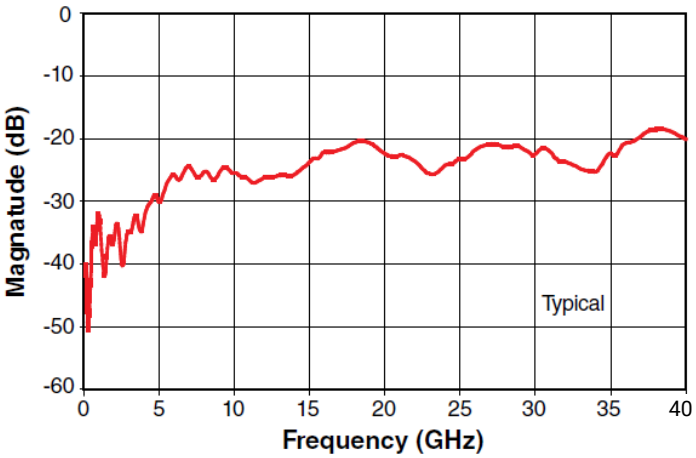
- Inductance: 2.0 µH, typ.
- DC Resistance:
  1.45 Ω, typ. at +20°C, 10 mA current.
- Rated DC Current: 250 ma, max.

TYPICAL ELECTRICAL PERFORMANCE

506WLC2R0 Insertion Loss (S21)



506WLC2R0 Return Loss (S11)



506WLC2R0KG250B Data Sheet Test Condition Description
All testing performed on 10-mil-thick Rogers R04350 microstrip board, with the UBL leads connected between the microstrip trace and the underside ground plane (nominal 50-ohm characteristic impedance).