ATC 506WLC2R0KG250B Ultra-Broadband Inductor

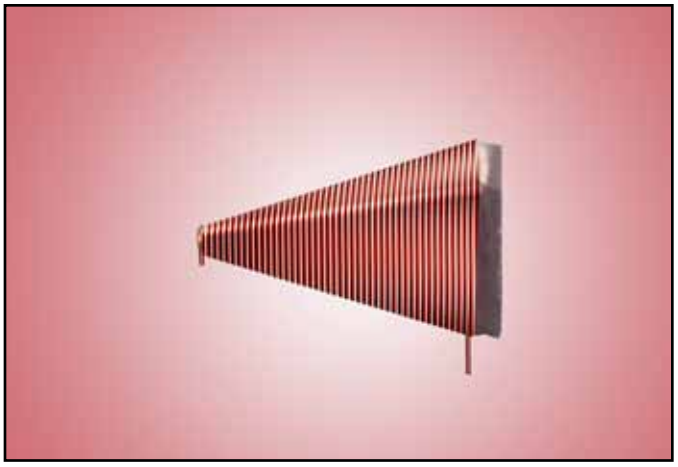
Features:

- 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 dc, max.*
- DC Resistance: 1.45 Ω, typ. @ 10 mA
- Operating Temperature Range: -40°C to +85°C
- Gold plated leads: 15 – 25 µ in.

ATC, the industry leader, is introducing the new 506WLC Series High Frequency **U**ltra-**B**roadband **I**nductor (**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 high-speed digital logic.

* Current for 100 °C Temperature rise
**patent pending

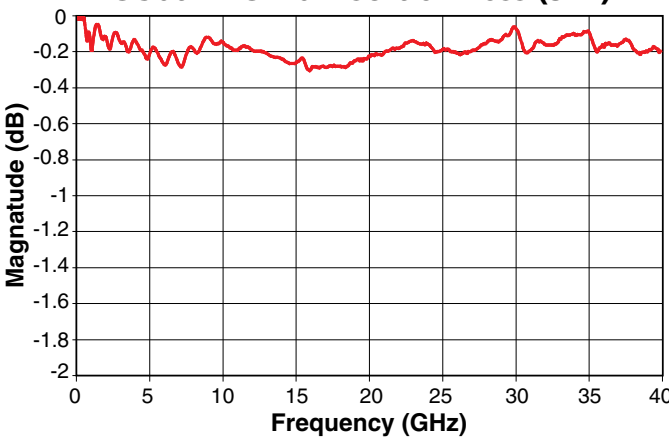


New Design

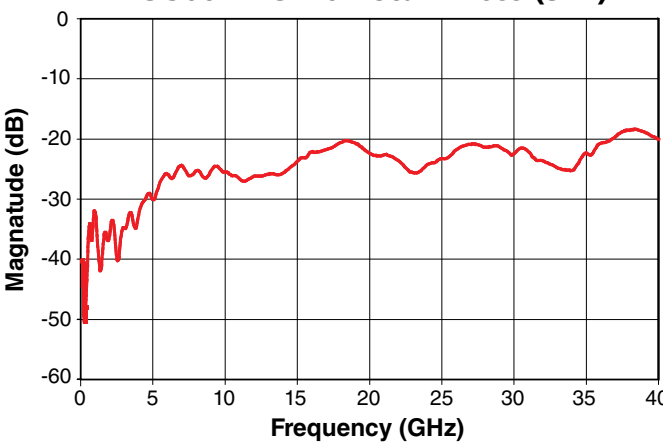
Advantages:

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

ATC 506WLC2R0 Insertion Loss (S21)



ATC 506WLC2R0 Return Loss (S11)



ATC 506WLC2R0KG250B Data Sheet Test Condition Description

All testing performed on 10-mil-thick Rogers RO4350 microstrip board, with the UBL leads connected between the microstrip trace and the underside ground plane (nominal 50-ohm characteristic impedance).

AMERICAN TECHNICAL CERAMICS

ATC North America
sales@atceramics.com

ATC Europe
saleseur@atceramics.com

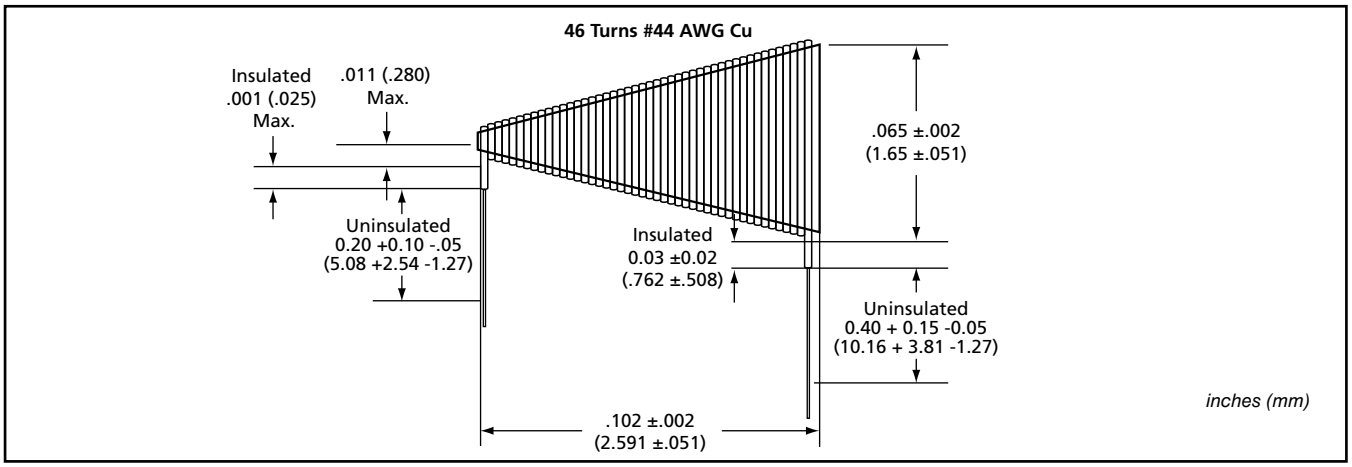
ATC Asia
sales@atceramics-asia.com

Electrical Specifications:

- Inductance: 2.0 µH, typ.
- Rated Current: 250 ma, max.
- Operating Temperature: -40°C to + 85°C
- Resistance: 1.45 Ω, typ. at +20°C, 10 mA current.

Inductance (µH)	Tolerance Code	R_{DC} (Ω)	I_{DC} (mA), max.	Number of Turns	Cu Wire Size (AWG)
2.0	K (±10%), typ.	1.45	250	46	44

Mechanical Dimensions



ATC PART NUMBER CODE

506WLC 2R0 K G 250 B

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

RoHS Compliant

The above part 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.

ATC accepts orders for our parts using designations ***with*** or ***without*** the "ATC" prefix.

Consult factory for additional performance data.

ATC # 001-1084 Rev. C; 9/12

AMERICAN TECHNICAL CERAMICS

ATC North America
sales@atceramics.com

ATC Europe
saleseur@atceramics.com

ATC Asia
sales@atceramics-asia.com

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THE ENGINEERS' CHOICE™ www.atceramics.com