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 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 high-speed digital logic.

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

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 506WLC Series Insertion Loss / Shunt Mounted (S21)

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).
**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.

<table>
<thead>
<tr>
<th>Inductance (µH)</th>
<th>Tolerance Code</th>
<th>R&lt;sub&gt;DC&lt;/sub&gt; (Ω)</th>
<th>I&lt;sub&gt;DC&lt;/sub&gt; (mA), max.</th>
<th>Number of Turns</th>
<th>Cu Wire Size (AWG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>K (±10%), typ.</td>
<td>1.45</td>
<td>250</td>
<td>44</td>
<td>44</td>
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</tbody>
</table>

**Mechanical Dimensions**

The above part number refers to a 506WLC Series 2.0 µH inductor, K tolerance (±10%, typ.), with Gold Plate (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.