ATC 506WLSN3R30KT350T Ultra-Broadband SMT Inductor

Features:
- Inductance: 3.30 µH
- Operating Frequency: 1.3 MHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.5 dB, typ.
- Return Loss (shunt mounted): >17 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

ATC, the industry leader, is introducing the new 506WLS 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 506WLS is ideal for ultra-broadband DC decoupling networks and bias tee applications in optical communications systems and equipment using high-speed digital logic.

Electrical Specifications:
- Inductance: 3.30 µH ±10%*
- Rated DC Current (I_{DC max.}): 350 mA**
- DC Resistance (R_{DC typ.}): 1.15 Ω, typ. at +20°C, 10 mA current.

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

*Inductance: measured at 1 MHz, 0.1 Vrms, 0 mA dc with HP4291A impedance analyzer
**Current Rating: based on a 100 °C temperature rise from a 25°C ambient.
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Outline Dimensions

Note: Terminal is configured to facilitate attachment close to inductor tip. Wire is copper plated with gold 20 µ in. ±5 µ in.

Mechanical Configurations

<table>
<thead>
<tr>
<th>Size</th>
<th>Length (L)</th>
<th>Width (W)</th>
<th>Height (H)</th>
<th>Cu Wire Size (AWG)</th>
<th>Number of Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>0.245 (6.223)</td>
<td>0.133 (3.378)</td>
<td>0.117 (2.972)</td>
<td>42</td>
<td>60</td>
</tr>
</tbody>
</table>

Unless noted otherwise, all dimensions are held to ±0.10 (.254)

ATC PART NUMBER CODE

Series ATC 506WLS
Case Size N
Inductance Code (µH) 3R30
3 significant digits for inductance
R = Decimal point

Packaging T = Tape and Reel
Current (mA) T = Tin Termination
Inductance Tolerance, (±10%)

The above part number refers to a 506WLS Series, Case Size N, 3.30 µH inductor, K tolerance (±10%, typ.), with Tin Termination(T), 350 mA, tape and reel packaging.

ATC accepts orders for our parts using designations with or without the “ATC” prefix.

Consult factory for additional performance data.

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ATC North America sales@atceramics.com
ATC Europe saleseur@atceramics.com
ATC Asia sales@atceramics-asia.com

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