

ATC 506WLSN1R47KT694T Ultra-Broadband SMT Inductor

Features:

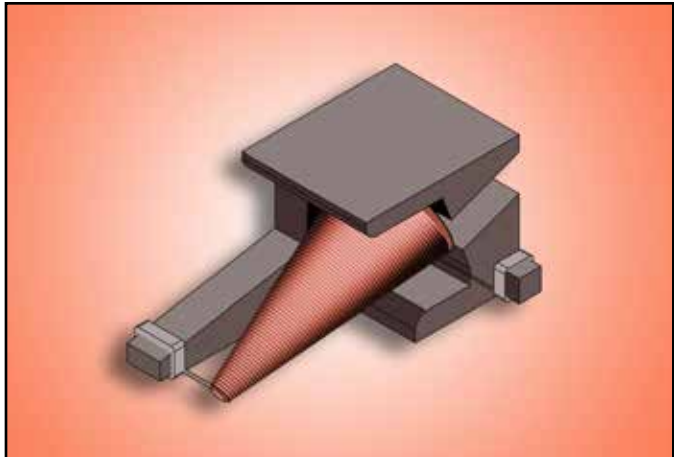
- Inductance: 1.47 μH
- Operating Frequency: 2.8 MHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.4 dB, typ.
- Return Loss (shunt mounted): >17 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

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: 1.47 $\mu\text{H} \pm 10\%$ *
- Rated DC Current ($I_{\text{DC max.}}$): 694 mA**
- DC Resistance ($R_{\text{DC typ.}}$): 0.33 Ω , typ. at +20°C, 10 mA current.



New Design

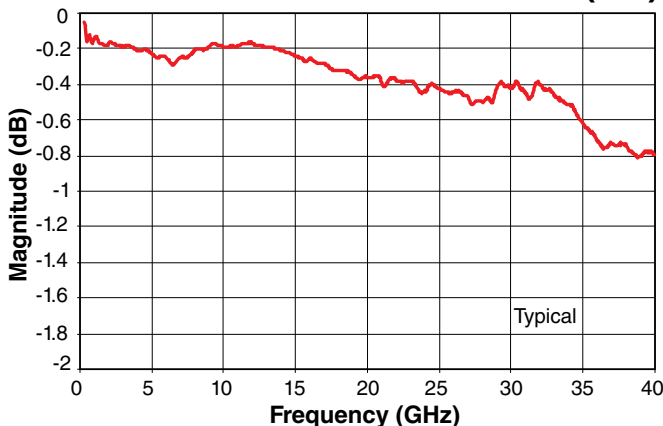
Advantages:

- 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

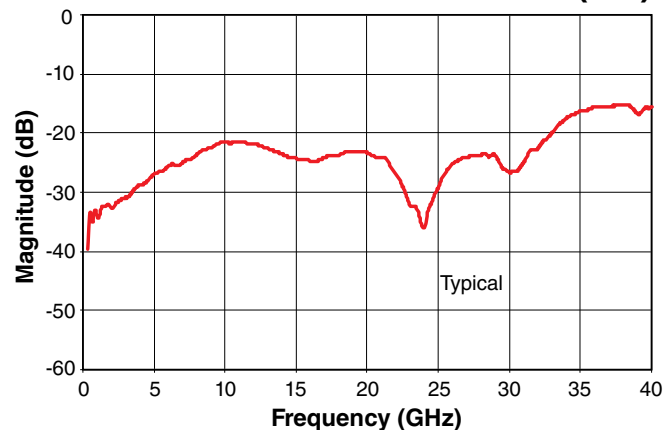
*Inductance: measured at 1 MHz, 0.1 Vrms, 0 mA dc with HP4291A impedance analyzer

**Current Rating: based on a 100 °C temperature rise from a 25°C ambient.

ATC 506WLSN1R47 Insertion Loss (S21)



ATC 506WLSN1R47 Return Loss (S11)



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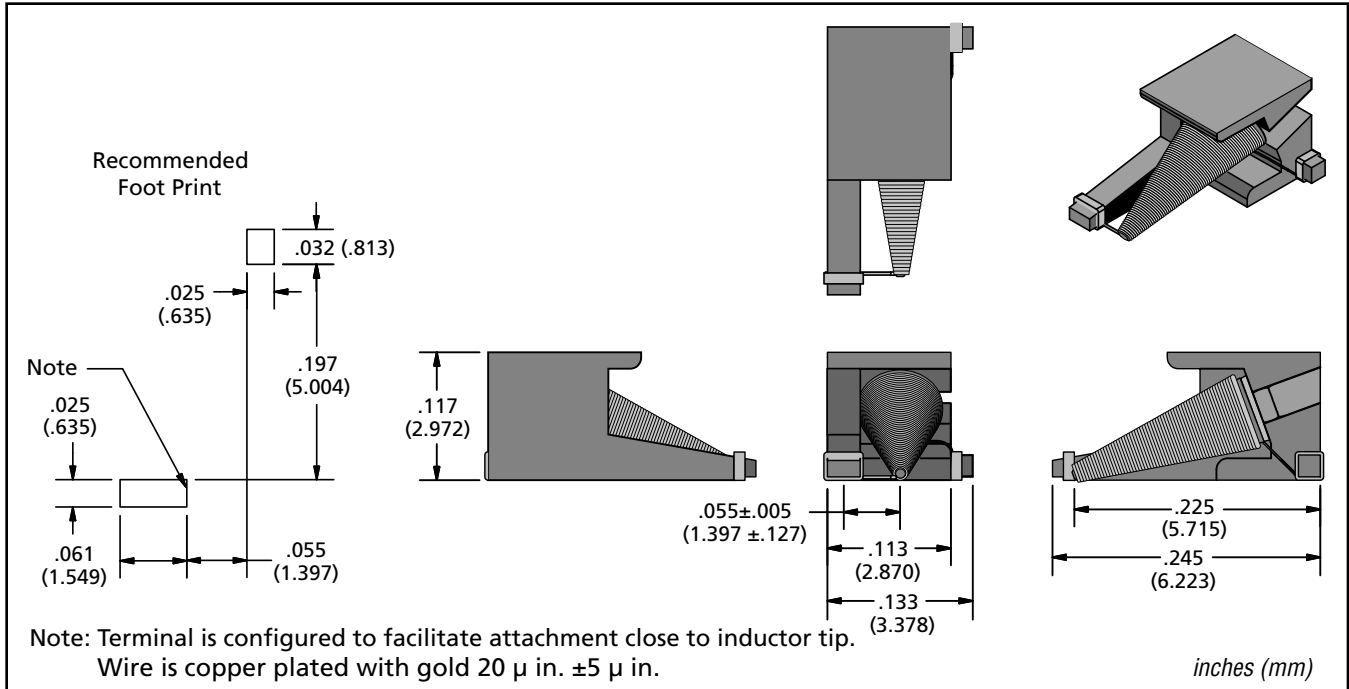
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Rev. G; 8/17

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ATC 506WLS SERIES UBL SMT INDUCTORS

Outline Dimensions



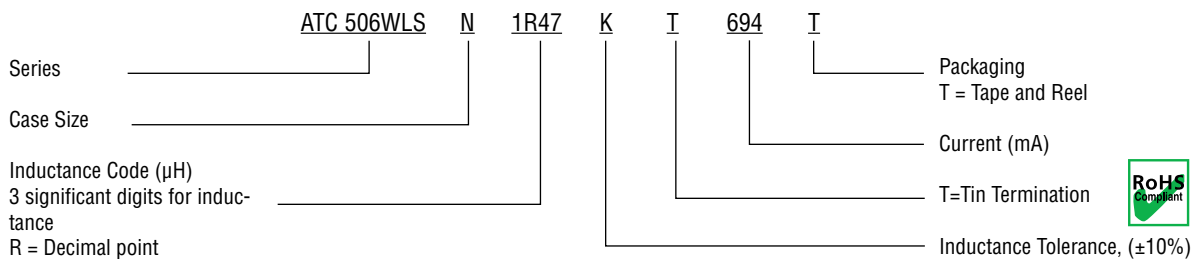
Mechanical Configurations

Size	Length (L)	Width (W)	Height (H)	Cu Wire Size (AWG)	Number of Turns
N	0.245 (6.223)	0.133 (3.378)	0.117 (2.972)	38	40

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

inches (mm)

ATC PART NUMBER CODE



The above part number refers to a 506WLS Series, Case Size N, 1.47 μH inductor, K tolerance (±10%, typ.), with Tin Termination (T), 694 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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