# ATC 506WLSN1R47KT694T Ultra-Broadband SMT Inductor

#### **Features:**

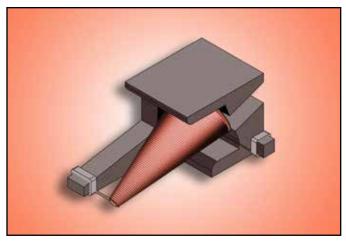
- Inductance: 1.47 μH
- Operating Frequency:
- 2.8 MHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.4 dB, typ.
- Return Loss (shunt mounted): >17 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

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:**

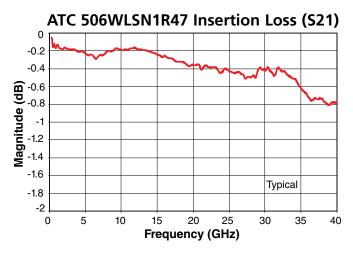
- Inductance: 1.47 µH ±10%\*
- Rated DC Current (IDC max.): 694 mA\*\*
- DC Resistance (R<sub>DC</sub> typ.): 0.33 Ω, typ. at +20°C, 10 mA current.

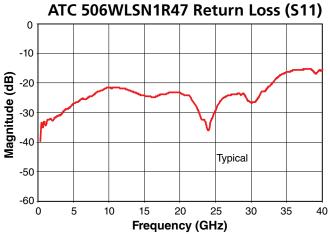


## New Design

#### **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.





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TECHNICAL

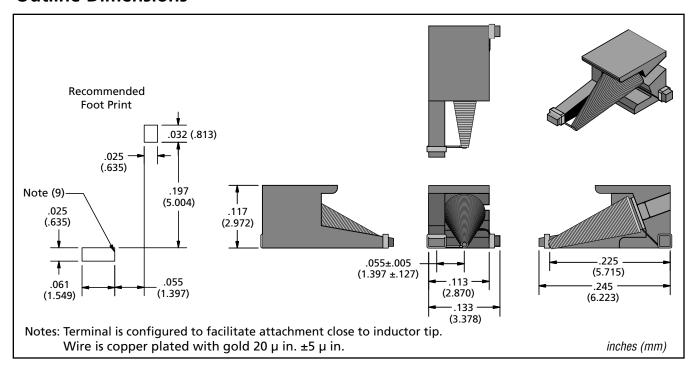
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#### **Outline Dimensions**



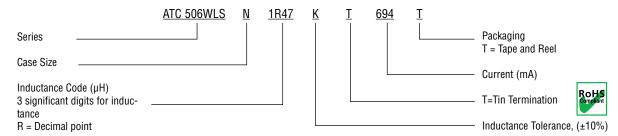
## **Mechanical Configurations**

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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