

## ATC 506WLSM0R47KT815T Ultra-Broadband SMT Inductor

### Features:

- Inductance: 0.47  $\mu$ H
- Operating Frequency: 9.5 MHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.5 dB, typ.
- Return Loss (shunt mounted): >20 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

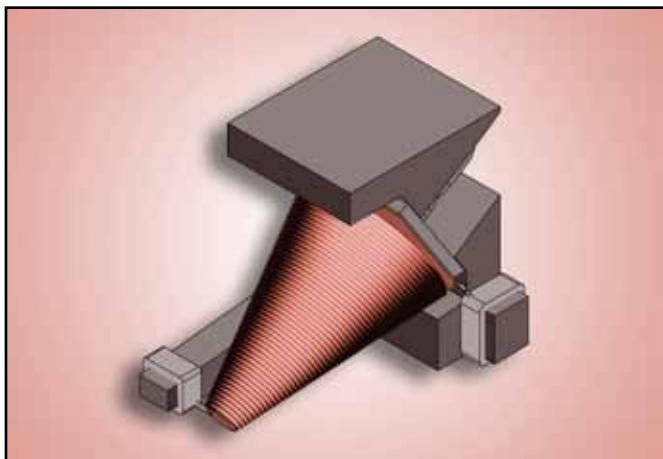
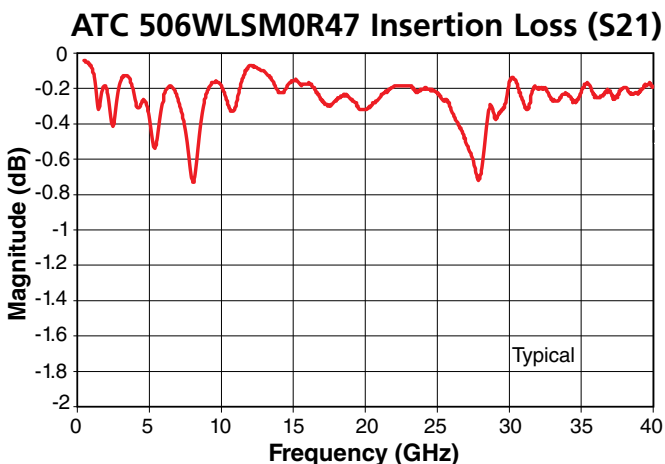
ATC, the industry leader, is introducing the new 506WLS Series High Frequency Ultra-Broadband Inductor (UBL). This unique component provides low insertion loss and an excellent match over multiple octaves of frequency spectrum.

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: 0.47  $\mu$ H  $\pm$ 10%
- Rated DC Current ( $I_{DC}$  max.): 815 mA\*
- DC Resistance ( $R_{DC}$  typ.): 0.19  $\Omega$ , typ. at +20°C, 10 mA current.

\*Current for 100 °C Temperature rise



### New Design

### Advantages:

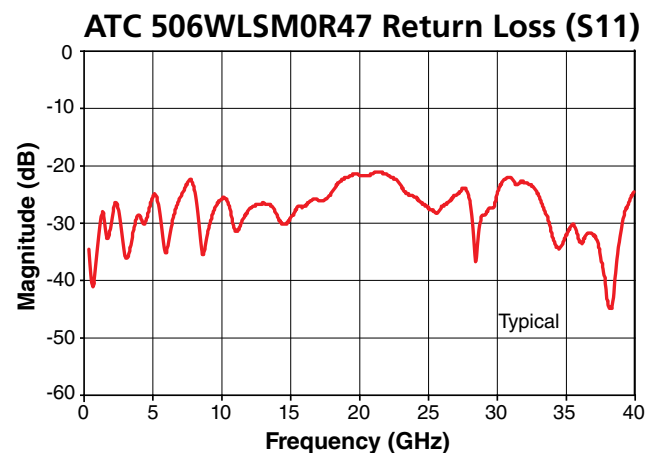
- Ultra-Broadband Performance
- Ultra-Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss Through 40 GHz
- Unit-to-Unit Performance Repeatability
- Rugged Powdered Iron Core

### Notes:

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.

Wire: Copper, plated with gold 20  $\mu$  in.  $\pm$ 5  $\mu$  in.



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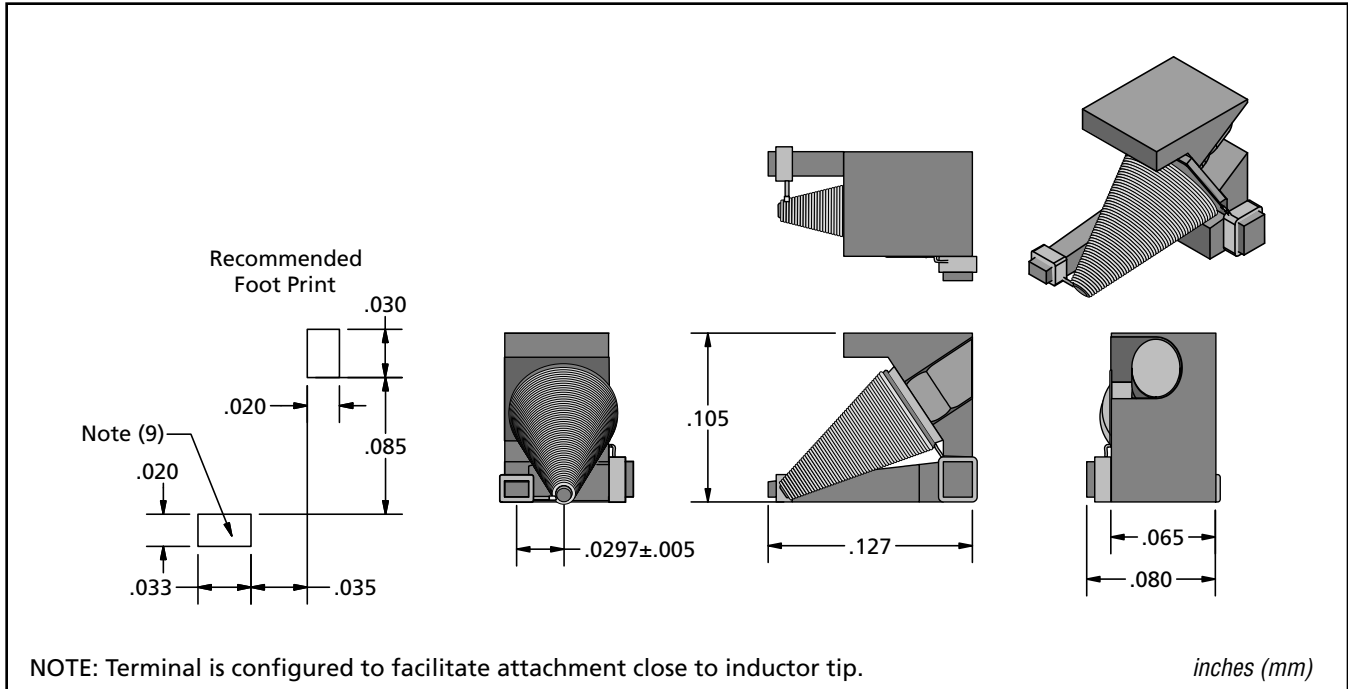
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# ATC 506WLS SERIES UBL SMT INDUCTORS

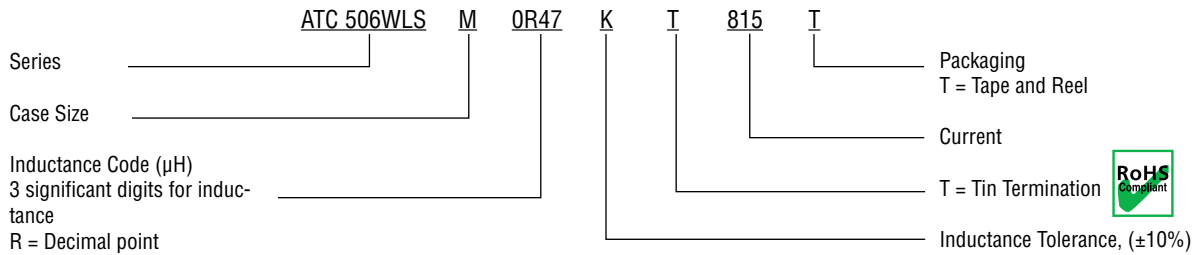
## Outline Dimensions



## Mechanical Configurations

Size	Length (L)	Width (W)	Height (H)	Cu Wire Size (AWG)	Number of Turns
M	0.127 (3.226)	0.08 (2.032)	0.105 (2.670)	38	22

inches (mm)



The above part number refers to a 506WLS Series, Case Size M, 0.47  $\mu\text{H}$  inductor, K tolerance ( $\pm 10\%$ , typ.), with Tin Termination (T), 815 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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