

## ATC 506WLSM3R80KT182T Ultra-Broadband SMT Inductor

### Features:

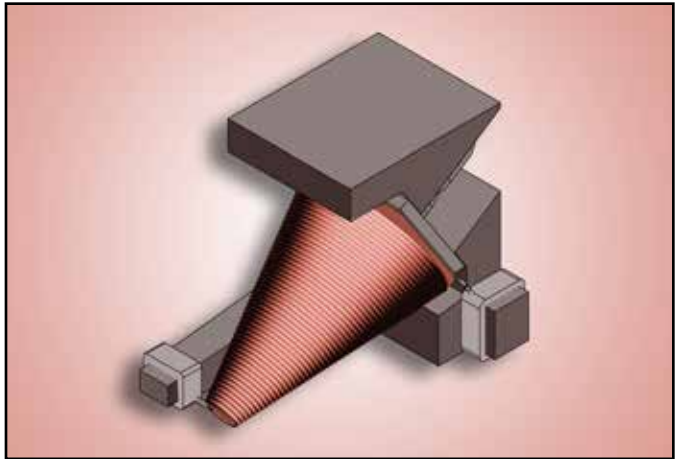
- Inductance: 3.80  $\mu\text{H}$
- Operating Frequency:  
1.1 MHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.4 dB, typ.
- Return Loss (shunt mounted): >25 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

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: 3.80  $\mu\text{H} \pm 10\%$ \*
- Rated DC Current ( $I_{\text{DC max.}}$ ): 182 mA\*\*
- DC Resistance ( $R_{\text{DC typ.}}$ ):  
3.70  $\Omega$ , typ. at +20°C, 10 mA current.



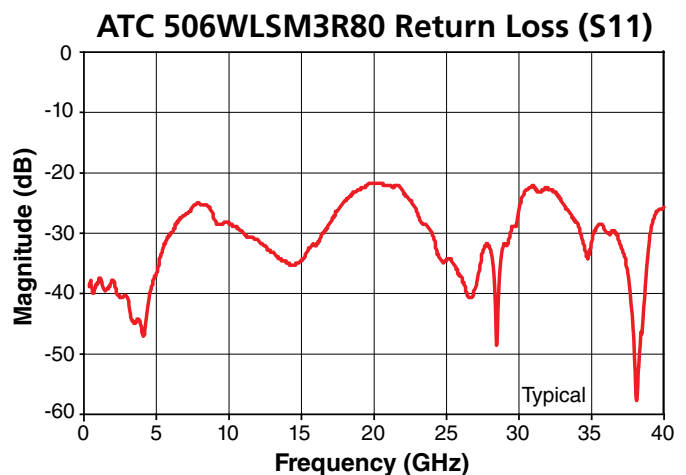
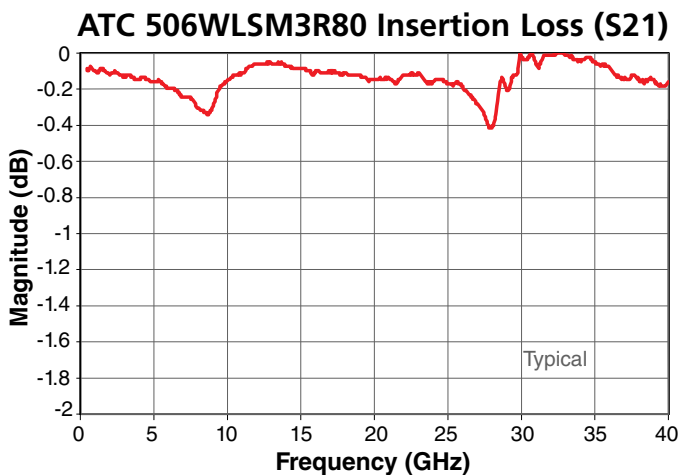
### New Design

### 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.



**AMERICAN**  
ATC North America  
sales@atceramics.com

**TECHNICAL**  
ATC Europe  
sales@atceramics.com

**CERAMICS**  
ATC Asia  
sales@atceramics-asia.com

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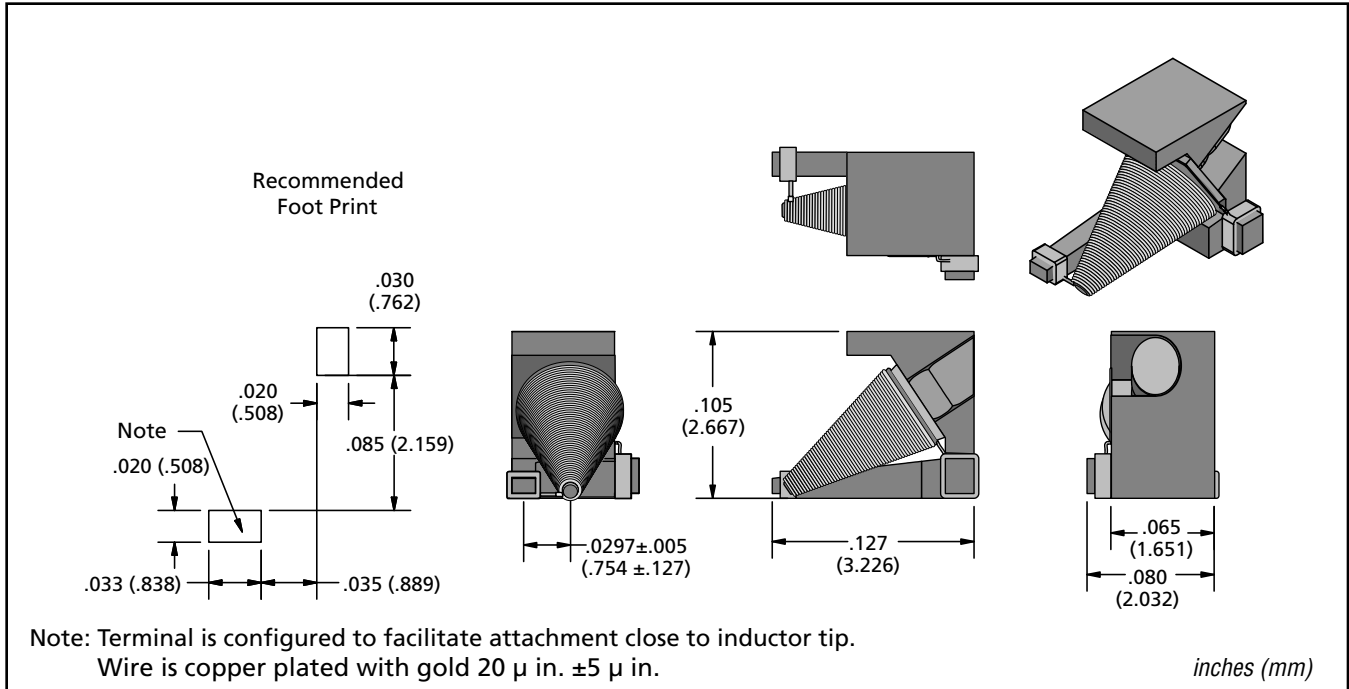
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ATC # 001-1112  
Rev. G; 8/17

# ATC 506WLS SERIES UBL SMT INDUCTORS

## Outline Dimensions



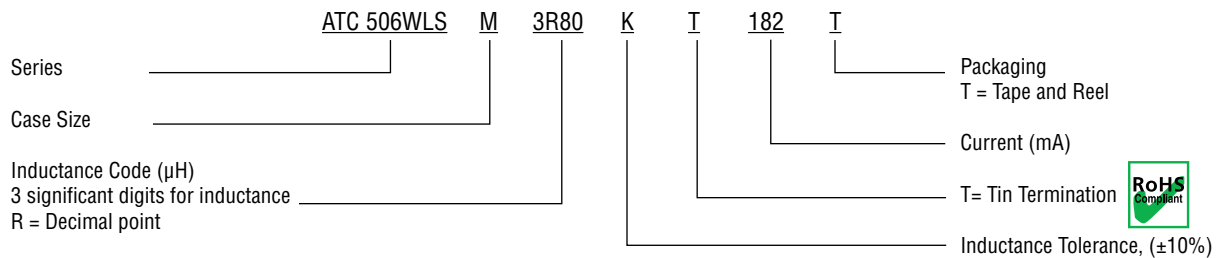
## Mechanical Configurations

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 (2.667)	47	60

Unless noted otherwise, all dimensions are held to  $\pm 0.10$  (.254)

inches (mm)

### ATC PART NUMBER CODE



The above part number refers to a 506WLS Series, Case Size M, 3.80  $\mu$ H inductor, K tolerance ( $\pm 10\%$ , typ.), with Tin Termination (T), 182 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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**AMERICAN**  
ATC North America  
sales@atceramics.com

**TECHNICAL**  
ATC Europe  
sales@atceramics.com

**CERAMICS**  
ATC Asia  
sales@atceramics-asia.com



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