

## ATC 506WLSN6R00KT236T Ultra-Broadband SMT Inductor

### Features:

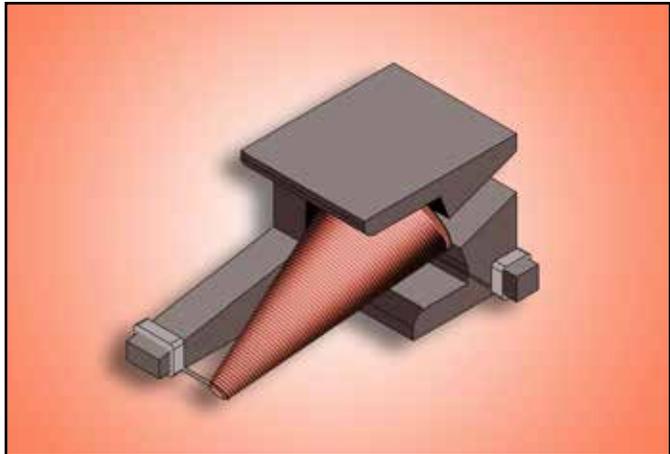
- Inductance: 6.00  $\mu$ H
- Operating Frequency: 700 KHz (-3 dB roll-off) through 40+ GHz, typ.
- Insertion Loss (shunt mounted): <0.4 dB, typ.
- Return Loss (shunt mounted): >18 dB, typ.
- Operating Temperature Range: -55°C to +125°C
- Lead-Free, RoHS Compliant Terminations

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: 6.00  $\mu$ H  $\pm$ 10%\*
- Rated DC Current ( $I_{DC}$  max.): 236 mA\*\*
- DC Resistance ( $R_{DC}$  typ.): 2.85  $\Omega$ , typ. at +20°C, 10 mA current.



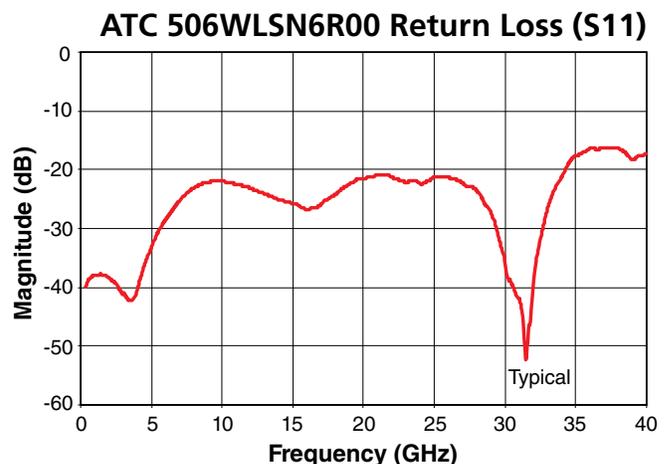
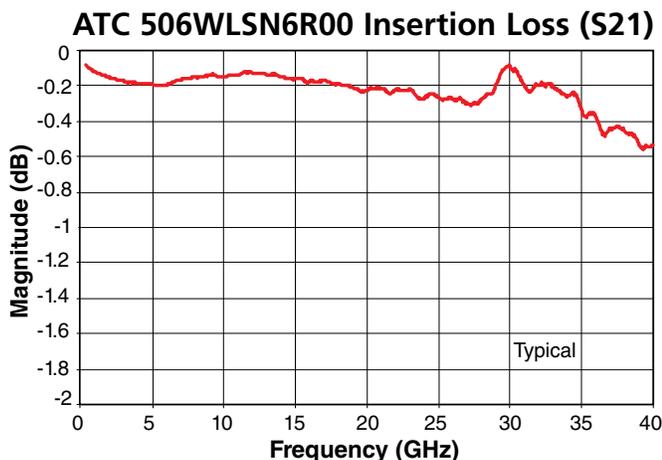
### New Design

### 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



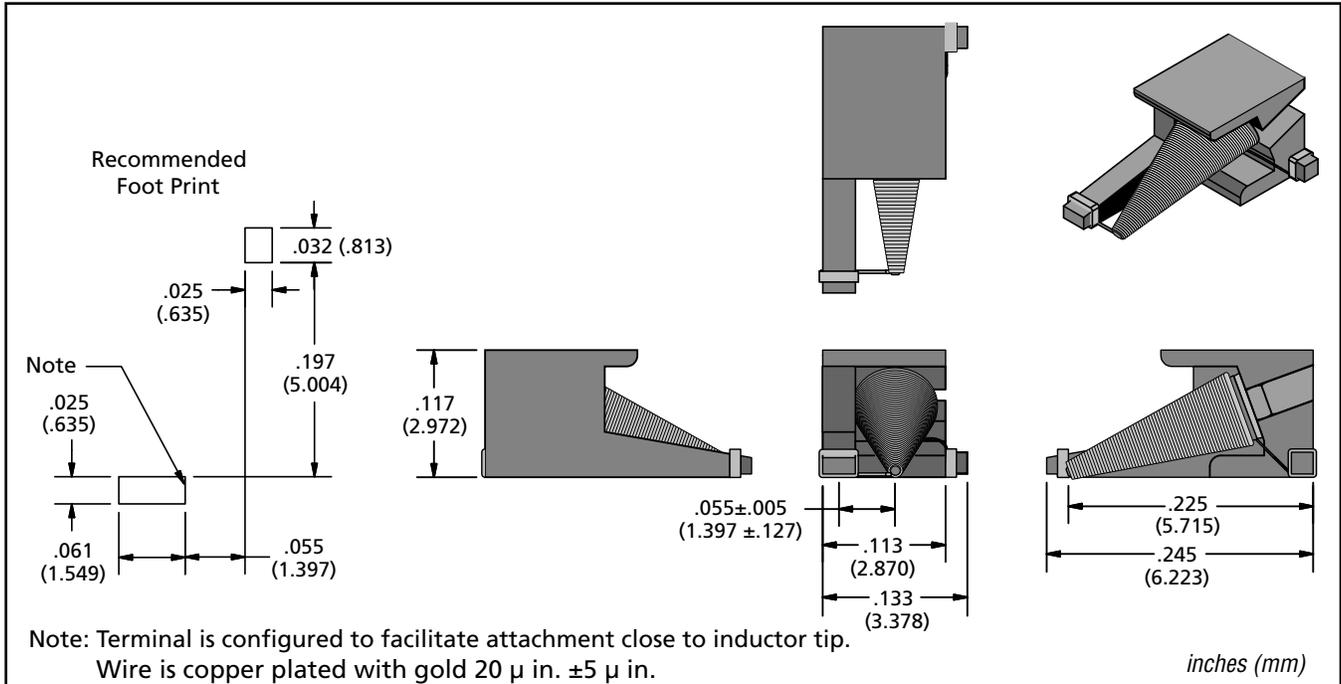
**THE ENGINEERS' CHOICE®**

**www.atceramics.com**

ATC # 001-1121  
Rev. G; 8/17

# ATC 506WLS SERIES UBL SMT INDUCTORS

## Outline Dimensions



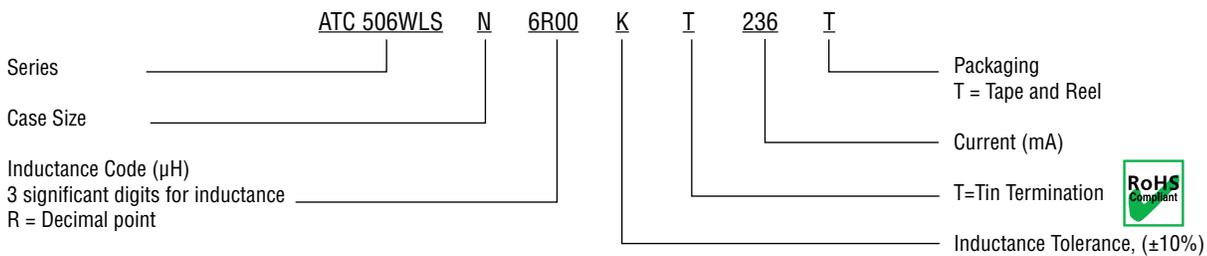
## Mechanical Configurations

Size	Length (L)	Width (W)	Height (H)	Cu Wire Size (AWG)	Number of Turns
N	0.245 (6.223)	0.133 (3.378)	0.117 (2.972)	44	78

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, 6.00 μH inductor, K tolerance (±10%, typ.), with Tin Termination (T), 236 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.

Sales of ATC products are subject to the terms and conditions contained in American Technical Ceramics Corp. Terms and Conditions of Sale (ATC document #001-992). Copies of these terms and conditions will be provided upon request. They may also be viewed on ATC's website at [www.atceramics.com/productfinder/default.asp](http://www.atceramics.com/productfinder/default.asp). Click on the link for Terms and Conditions of Sale.

ATC has made every effort to have this information as accurate as possible. However, no responsibility is assumed by ATC for its use, nor for any infringements of rights of third parties which may result from its use. ATC reserves the right to revise the content or modify its product line without prior notice.

© 2012 American Technical Ceramics Corp. All Rights Reserved.

ATC # 001-1121 Rev. G; 8/17



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

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

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



THE ENGINEERS' CHOICE®

www.atceramics.com