

The Multilayer Organic Tight Tolerance Inductor is a low profile organic based inductor that can support mobile communications, satellite applications, GPS, matching networks, and collision avoidance. The MLO™ Tight Tolerance Inductor series of components are based on AVX's patented multilayer organic technology (US patent 6,987,307). MLO™ Tight Tolerance Inductors incorporate very low loss organic materials which allow for high Q and high stability over frequency. MLO™ Tight Tolerance Inductors are surface mountable and are expansion matched to FR4 printed wiring boards. MLO™ Tight Tolerance Inductors utilize fine line high density interconnect technology thereby allowing for tight tolerance control and high repeatability. Reliability testing is performed to JEDEC and mil standards. Finishes are available in RoHS compliant Sn.

## APPLICATIONS

- Mobile communications
- Satellite Applications
- GPS
- Collision Avoidance
- Wireless LAN's

## FEATURES

- Tight Tolerance
- High Frequency
- High Withstanding Voltage
- Low DC Resistance
- Surface Mountable
- 0402 Case Size
- RoHS Compliant Finishes
- Available in Tape and Reel

## SURFACE MOUNT ADVANTAGES

- Inherent Low Profile
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation
- Expansion Matched to PCB

## HOW TO ORDER

**HL**  
T  
Style  
Tight  
Toleranc

**02**  
T  
Size  
02 = 0402

**XXX**  
T

**Inductance**  
Expressed in nH  
(2 significant digits + number of zeros)  
**for values <10nH,**  
letter R denotes decimal point.  
Example:  
22nH = 220  
4.7nH = 4R7

**X**  
T

**Tolerance**  
A =  $\pm 0.05\text{nH}$   
B =  $\pm 0.1\text{nH}$   
G =  $\pm 2\%$

**T**  
T

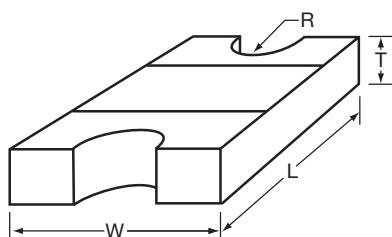
**Termination**  
Sn100

**TR**  
T

**Packaging**  
5000pcs  
T&R



## DIMENSIONS



mm (inches)

<b>L</b>	<b>W</b>	<b>T</b>	<b>R</b>
1.00 $\pm$ 0.10 (0.040 $\pm$ 0.004)	0.58 $\pm$ 0.075 (0.023 $\pm$ 0.003)	0.35 $\pm$ 0.10 (0.014 $\pm$ 0.004)	0.125 $\pm$ 0.050 (0.005 $\pm$ 0.002)

## QUALITY INSPECTION

Finished parts are 100% tested for electrical parameters and visual characteristics.

## TERMINATION

RoHS compliant Sn finish.

## OPERATING TEMPERATURE

-55°C to +125°C

## 0402 ELECTRICAL SPECIFICATIONS

L (nH) 450MHz	Available Inductance Tolerance A = $\pm 0.05$ nH, B = $\pm 0.1$ nH G = $\pm 2\%$	Q 450MHz	I <sub>dc</sub> max (mA)	R <sub>dc</sub> max (mΩ)	SRF min (GHz)
0.8	$\pm 0.05$ nH, $\pm 0.1$ nH	15	450	100	7
0.9	$\pm 0.05$ nH, $\pm 0.1$ nH	15	450	100	7
1	$\pm 0.05$ nH, $\pm 0.1$ nH	15	420	100	7
1.1	$\pm 0.05$ nH, $\pm 0.1$ nH	15	410	100	7
1.2	$\pm 0.05$ nH, $\pm 0.1$ nH	15	410	110	7
1.3	$\pm 0.05$ nH, $\pm 0.1$ nH	15	295	13	7
1.5	$\pm 0.05$ nH, $\pm 0.1$ nH	15	295	150	7
1.6	$\pm 0.05$ nH, $\pm 0.1$ nH	15	230	150	7
1.8	$\pm 0.05$ nH, $\pm 0.1$ nH	15	295	160	7
2	$\pm 0.05$ nH, $\pm 0.1$ nH	15	230	18	7
2.2	$\pm 0.05$ nH, $\pm 0.1$ nH	15	230	200	7
2.4	$\pm 0.05$ nH, $\pm 0.1$ nH	15	230	200	7
2.7	$\pm 0.05$ nH, $\pm 0.1$ nH	15	230	250	7
3	$\pm 0.05$ nH, $\pm 0.1$ nH	15	200	300	7
3.3	$\pm 0.05$ nH, $\pm 0.1$ nH	15	200	340	7
3.6	$\pm 0.05$ nH, $\pm 0.1$ nH	15	180	350	7
3.9	$\pm 0.05$ nH, $\pm 0.1$ nH	15	180	400	7
4.7	$\pm 0.1$ nH	15	170	480	7
5.6	$\pm 0.1$ nH	15	150	500	7
6.8	$\pm 0.1$ nH	15	140	600	7
8.2	$\pm 0.1$ nH	15	115	800	6
10	$\pm 2\%$	15	105	1000	5
12	$\pm 2\%$	15	95	1100	4
15	$\pm 2\%$	15	95	1200	4
18	$\pm 2\%$	15	85	1500	3
22	$\pm 2\%$	15	75	1900	3
27	$\pm 2\%$	15	75	2100	3
30	$\pm 2\%$	15	65	2200	2
32	$\pm 2\%$	15	65	2200	2

Specifications based on performance of component assembled properly on printed circuit board with 50Ω nominal impedance.