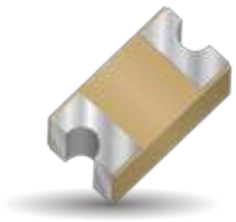
Multilayer Organic (MLO®) Inductors
Tight Tolerance



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 KYOCERA AVX 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

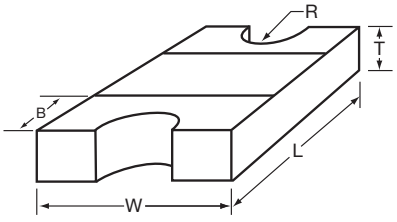
SURFACE MOUNT ADVANTAGES
- Inherent Low Profile
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation
- Expansion Matched to PCB

HOW TO ORDER

HL	02	XXX	X	T	TR	
Style Tight Tolerance	**Size** 02 = 0402	**Inductance** Expressed in nH (2 significant digits + number of zeros) **for values <10nH,** letter R denotes decimal point. Example: 22nH = 220, 4.7nH = 4R7	**Tolerance** A = ±0.05nH, B = ±0.1nH, G = ±2%	**Termination** Sn100	**Packaging** 5000pcs T&R	RoHS COMPLIANT

DIMENSIONS

mm (inches)



mm (inches)

L	W	T	R	B
1.00±0.10 (0.040±0.004)	0.58±0.075 (0.023±0.003)	0.35±0.10 (0.014±0.004)	0.125±0.050 (0.005±0.002)	0.23±0.0508 (0.0092±0.002)

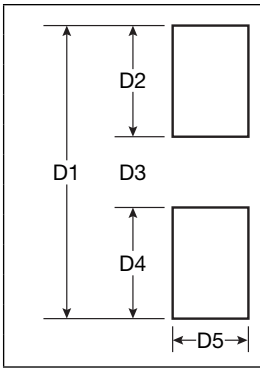
QUALITY INSPECTION
Finished parts are 100% tested for electrical parameters and visual characteristics.

TERMINATION
RoHS compliant Sn finish.

OPERATING TEMPERATURE
-55°C to +125°C

RECOMMENDED FOOTPRINT

mm (inches)



Case Size	D1	D2	D3	D4	D5
0201	0.85 (0.033)	0.30 (0.012)	0.25 (0.010)	0.30 (0.012)	0.35 (0.014)
0402	1.70 (0.067)	0.60 (0.024)	0.50 (0.020)	0.60 (0.024)	0.50 (0.020)
0603	2.30 (0.091)	0.80 (0.031)	0.70 (0.028)	0.80 (0.031)	0.75 (0.030)
0805	3.00 (0.118)	1.00 (0.039)	1.00 (0.039)	1.00 (0.039)	1.25 (0.049)
1206	4.00 (0.157)	1.00 (0.039)	2.00 (0.079)	1.00 (0.039)	1.60 (0.063)
1210	4.00 (0.157)	1.00 (0.039)	2.00 (0.079)	1.00 (0.039)	2.50 (0.098)
1808	5.60 (0.220)	1.00 (0.039)	3.60 (0.142)	1.00 (0.039)	2.00 (0.079)
1812	5.60 (0.220)	1.00 (0.039)	3.60 (0.142)	1.00 (0.039)	3.00 (0.118)
1825	5.60 (0.220)	1.00 (0.039)	3.60 (0.142)	1.00 (0.039)	6.35 (0.250)
2220	6.60 (0.260)	1.00 (0.039)	4.60 (0.181)	01.00 (0.039)	5.00 (0.197)
2225	6.60 (0.260)	1.00 (0.039)	4.60 (0.181)	1.00 (0.039)	6.35 (0.250)

Component Pad Design
Component pads should be designed to achieve good solder filets and minimize component movement during reflow soldering. pad designs are given below for the most common sizes of multilayer ceramic capacitors for both wave and reflow soldering. The basis of these designs is:

- Pad width equal to component width. It is permissible to decrease this to as low as 85% of component width but it is not advisable to go below this.
- Pad overlap 0.5mm beneath component.
- Pad extension 0.5mm beyond components for relow and 1.0mm to wave soldering.

0402 ELECTRICAL SPECIFICATIONS

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

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

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.