MLO™ Hi-Q Inductors

The Multilayer Organic Hi-Q Inductor is a low profile organic based inductor that can support mobile communications, satellite applications, GPS, matching networks, and collision avoidance. The MLO™ Hi-Q Inductor series of components are based on AVX's patented multilayer organic technology (US patent 6,987,307 and 7,439,840). MLO™ Hi-Q Inductors incorporate very low loss organic materials and low profile copper which allow for high Q and high stability over frequency. MLO™ Hi-Q Inductors are surface mountable and are expansion matched to FR4 printed wiring boards. MLO™ Hi-Q 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

- High Q
- High SRF
- High Frequency
- Low DC Resistance
- Surface Mountable
- 0402 Case Size
- RoHS Compliant Finishes
- Available in Tape and Reel

SURFACE MOUNT ADVANTAGES

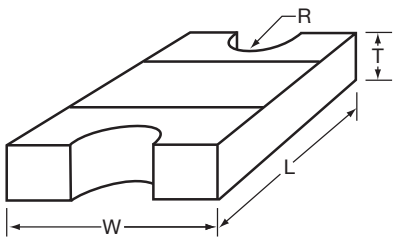
- Inherent Low Profile
- Excellent Solderability
- Low Parasitics
- Better Heat Dissipation
- Expansion Matched to PCB

HOW TO ORDER

HLQ	02	XXX	X	T	TR	
Type	**Size**	**Inductance**	**Tolerance**	**Termination**	**Packaging**	
HLQ = High Q	02 = 0402	Expressed in nH (2 significant digits + number of zeros) **for values <10nH,** letter R denotes decimal point. Example: 22nH = 220 4.7nH = 4R7	B = ±0.1nH C = ±0.2nH H = ±3%	Sn100	5000pcs T&R	RoHS COMPLIANT

6

DIMENSIONS



mm (inches)

L	W	T	R
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)

QUALITY INSPECTION

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

TERMINATION

RoHS compliant Sn finish.

OPERATING TEMPERATURE

-55ºC to +125ºC

0402 ELECTRICAL SPECIFICATIONS

L (nH) 450MHz	Available Inductance Tolerance B = ±0.1nH, C = ±0.2nH H = ±3%	Q min 450MHz	SRF min (GHz)	Rdc max (mΩ)	Idc max (mA)
0.8	±0.1nH, ±0.2nH	17	7	100	350
0.9	±0.1nH, ±0.2nH	17	7	100	350
1	±0.1nH, ±0.2nH	17	7	100	330
1.1	±0.1nH, ±0.2nH	17	7	100	330
1.2	±0.1nH, ±0.2nH	17	7	110	330
1.3	±0.1nH, ±0.2nH	17	7	130	330
1.5	±0.1nH, ±0.2nH	17	7	150	330
1.6	±0.1nH, ±0.2nH	17	7	150	300
1.8	±0.1nH, ±0.2nH	17	7	160	300
2	±0.1nH, ±0.2nH	17	7	180	245
2.2	±0.1nH, ±0.2nH	17	7	200	245
2.4	±0.1nH, ±0.2nH	17	7	200	245
2.7	±0.1nH, ±0.2nH	17	7	250	245
3	±0.1nH, ±0.2nH	17	7	300	225
3.3	±0.1nH, ±0.2nH	17	7	340	225
3.6	±0.1nH, ±0.2nH	17	7	350	200
3.9	±0.1nH, ±0.2nH	17	7	400	200
4.7	±0.1nH, ±0.2nH	17	7	480	195
5.6	±0.1nH, ±0.2nH	17	7	500	170
6.8	±3%	17	7	600	160
8.2	±3%	17	6	800	130
10	±3%	17	5	1000	120
12	±3%	17	4	1100	110
15	±3%	17	4	1200	110
18	±3%	17	3	1500	110
22	±3%	17	3	1900	95
27	±3%	17	3	2100	95
30	±3%	17	2	2200	85
32	±3%	17	2	2200	85

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

Idc max: Maximum 15ºC rise in component temperature over ambient.