MLO™ High Current Inductors

The Multilayer Organic High Current Inductor is a low profile organic based inductor that can support mobile communications, satellite applications, GPS, matching networks, and collision avoidance. Based on AVX's patented multilayer organic technology (US patent 6,987,307), the 0402 size Multilayer Organic High Current Inductor allows for much higher current handling over similar multilayer ceramic chip inductors, a 50% average increase in current handling over comparable thin film products with similar Q, and current handling approaching that of wire wound ceramic chip inductors. MLO™ High Current Inductors incorporate very low loss organic materials which allow for high Q and high stability over frequency. They are surface mountable and are expansion matched to FR4 printed wiring boards. MLO™ High Current 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
- High Current Handling
- Low DC Resistance
- Surface Mountable
- 0402 Case Size
- RoHS Compliant Finishes
- Available in Tape and Reel

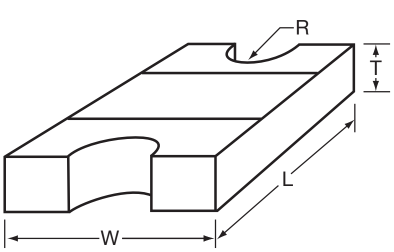
SURFACE MOUNT ADVANTAGES

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

HOW TO ORDER

HLC	02	XXX	X	T	TR
Type HLC = High Current	**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** B = ±0.1nH C = ±0.2nH D = ±0.5nH G = ±2% H = ±3%. J = ±5%	**Termination** Sn100	**Packaging** Tape & Reel

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

450 MHz Test Frequency			900 MHz Test Frequency		1900 MHz Test Frequency		2400 MHz Test Frequency		SRF Min (GHz)	Rdc Max (mΩ)	Idc Max (mA)
L (nH) 450 MHz	Available Inductance Tolerance B = ±0.1nH, C = ±0.2nH D = ±0.5nH, G = ±2% H = ±3%, J = ±5%	Q 450 MHz	L (nH) 900 MHz	Q 900 MHz	L (nH) 1900 MHz	Q 1900 MHz	L (nH) 2400 MHz	Q 2400 MHz			
0.8	±0.1nH, ±0.2nH, ±0.5nH	30	0.8	42	0.8	55	0.8	61	>20	100	875
0.9	±0.1nH, ±0.2nH, ±0.5nH	26	0.9	36	0.9	47	0.9	52	>20	100	835
1	±0.1nH, ±0.2nH, ±0.5nH	25	1.0	34	1.0	45	1.0	50	>20	100	800
1.1	±0.1nH, ±0.2nH, ±0.5nH	24	1.1	33	1.1	43	1.1	48	20	100	782
1.2	±0.1nH, ±0.2nH, ±0.5nH	24	1.2	33	1.2	44	1.2	48	20	110	751
1.3	±0.1nH, ±0.2nH, ±0.5nH	25	1.3	34	1.3	44	1.3	49	19	130	725
1.5	±0.1nH, ±0.2nH, ±0.5nH	25	1.5	35	1.5	45	1.5	50	19	150	679
1.6	±0.1nH, ±0.2nH, ±0.5nH	25	1.6	35	1.6	45	1.6	49	18	150	660
1.8	±0.1nH, ±0.2nH, ±0.5nH	25	1.8	35	1.8	45	1.8	49	18	160	626
2	±0.1nH, ±0.2nH, ±0.5nH	26	2.0	35	2.0	45	2.1	49	17	180	596
2.2	±0.1nH, ±0.2nH, ±0.5nH	27	2.2	36	2.2	46	2.2	50	16	200	571
2.4	±0.1nH, ±0.2nH, ±0.5nH	27	2.4	37	2.4	47	2.4	50	15	200	549
2.7	±0.1nH, ±0.2nH, ±0.5nH	27	2.7	36	2.7	46	2.7	48	14	250	521
3	±0.1nH, ±0.2nH, ±0.5nH	27	3.0	36	3.0	44	3.1	46	12	300	497
3.3	±0.1nH, ±0.2nH, ±0.5nH	27	3.3	36	3.3	44	3.4	46	11	340	476
3.6	±0.1nH, ±0.2nH, ±0.5nH	27	3.6	37	3.7	45	3.8	46	10	350	457
3.9	±0.1nH, ±0.2nH, ±0.5nH	28	3.9	38	4.0	46	4.1	47	10	400	441
4.7	±0.1nH, ±0.2nH, ±0.5nH	29	4.7	39	4.9	45	5.1	44	9	480	405
5.6	±0.1nH, ±0.2nH, ±0.5nH	30	5.7	40	6.0	44	6.3	42	8	500	375
6.8	±2%, ±3%, ±5%	30	6.9	39	7.5	41	8.0	37	7	600	343
8.2	±2%, ±3%, ±5%	29	8.4	37	9.4	37	10.4	31	6	800	315
10	±2%, ±3%, ±5%	30	10.3	38	12.0	35	13.9	27	5	1000	290
12	±2%, ±3%, ±5%	32	12.5	40	15.7	31	19.8	19	4	1100	265
15	±2%, ±3%, ±5%	32	15.9	38	22.3	24	33.0	9	4	1200	240
18	±2%, ±3%, ±5%	28	19.4	32	31.1	15	60.0	0.3	3	1500	210
22	±2%, ±3%, ±5%	30	24.0	34	44.7	11	n/a	n/a	3	1900	202
27	±2%, ±3%, ±5%	29	30.5	30	n/a	n/a	n/a	n/a	3	2100	184
30	±2%, ±3%, ±5%	28	34.0	27	n/a	n/a	n/a	n/a	2	2200	180
32	±2%, ±3%, ±5%	28	37.7	27	n/a	n/a	n/a	n/a	2	2200	175

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.