



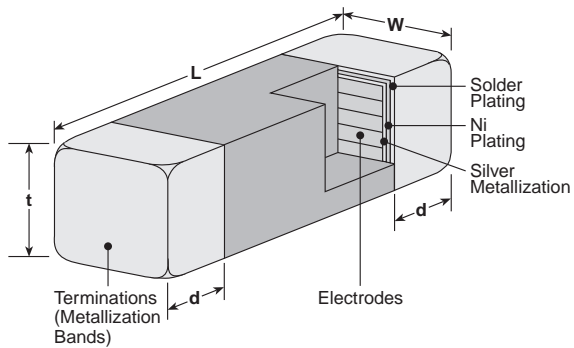
**multilayer ceramic inductor**



**features**

- Monolithic structure provides high reliability in a wide temperature and humidity range
- High quality ceramic material and unique manufacturing process provides high Q at high frequency
- Nickel barrier with solder overcoat for excellent solderability
- Products with lead-free terminations meet EU RoHS requirements

**dimensions and construction**



Size Code	Dimensions inches (mm)			
	L	W	t	d
<b>1E (0402)</b>	.039±.004 (1.0±0.1)	.02±.004 (0.5±0.1)	.02±.004 (0.5±0.1)	.01±.004 (0.25±0.1)
<b>1J (0603)</b>	.063±.006 (1.6±0.15)	.031±.006 (0.8±0.15)	.031±.006 (0.8±0.15)	.012±.008 (0.3±0.20)

Inductors

**ordering information**

<b>MHL</b>	<b>1E</b>	<b>C</b>	<b>T</b>	<b>TP</b>	<b>3N9</b>	<b>S</b>
Type	Size Code 1E 1J	Material Permeability Code: C	Termination Material T: Sn	Packaging TP: 7" paper tape 2 mm pitch (1E only - 10,000 pieces/reel) TD: 7" paper tape (1J - 4,000 pieces/reel)	Nominal Inductance 3N9 = 3.9nH R10 = 100nH	Tolerance S: ±0.3nH J: ±5%

For further information on packaging, please refer to Appendix A.

**applications and ratings**

Part Designation	Inductance L (nH)	Inductance Tolerance	Q Minimum (100MHz)	Self Resonant Frequency Typical (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Operating Temperature Range**
MHL1ECTTP1N0*	1.0	S: ±0.3nH	8	10000	0.12	300	-55°C to +125°C
MHL1ECTTP1N2*	1.2						
MHL1ECTTP2N2*	2.2						
MHL1ECTTP3N3*	3.3			4000	0.16		
MHL1ECTTP3N9*	3.9						
MHL1ECTTP4N7*	4.7						
MHL1ECTTP5N6*	5.6						

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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multilayer ceramic inductor

applications and ratings (continued)

Part Designation	Inductance L (nH)	Inductance Tolerance	Q Minimum (100MHz)	Self Resonant Frequency Typical (MHz)	DC Resistance Maximum ( $\Omega$ )	Allowable DC Current Maximum (mA)	Operating Temperature Range**					
MHL1ECTTP6N8*	6.8	J: $\pm$ 5%	8	3900	0.32	300	-55°C to +125°C					
MHL1ECTTP8N2*	8.2			3500	0.37							
MHL1ECTTP10N*	10			3200	0.42							
MHL1ECTTP12N*	12			2600	0.50							
MHL1ECTTP15N*	15			2300	0.55							
MHL1ECTTP18N*	18			2000	0.65							
MHL1ECTTP22N*	22			1600	0.8	200						
MHL1ECTTP27N*	27			1400	0.9							
MHL1ECTTP39N*	39			1100	1.2	100						
MHL1ECTTP47N*	47			900	1.3							
MHL1ECTTP56N*	56			750	1.4							
MHL1ECTTP82N*	82			600	1.6							
MHL1ECTTPR10*	100				2.0							
MHL1JCTTD1N5*	1.5			S: $\pm$ 0.3nH	8	6000		0.10	600	-55°C to +125°C		
MHL1JCTTD1N8*	1.8											
MHL1JCTTD2N2*	2.2											
MHL1JCTTD2N7*	2.7											
MHL1JCTTD3N3*	3.3	10	5200				0.13					
MHL1JCTTD3N9*	3.9		5000				0.15					
MHL1JCTTD4N7*	4.7		4000				0.20					
MHL1JCTTD5N6*	5.6		0.23									
MHL1JCTTD6N8*	6.8	J: $\pm$ 5%	12				0.25				600	-55°C to +125°C
MHL1JCTTD8N2*	8.2						3500					
MHL1JCTTD10N*	10			3200	0.30							
MHL1JCTTD12N*	12			2600	0.35							
MHL1JCTTD15N*	15			2300	0.40							
MHL1JCTTD18N*	18			2000	0.45							
MHL1JCTTD22N*	22			1600	0.50							
MHL1JCTTD27N*	27			1400	0.55							
MHL1JCTTD33N*	33			1200	0.60							
MHL1JCTTD39N*	39			1100	0.65	500						
MHL1JCTTD47N*	47	900	0.70									
MHL1JCTTD68N*	68	700	0.80	400								
MHL1JCTTD82N*	82	600	1.0	300								
MHL1JCTTDR12*	120	8***	500	1.3	250							
MHL1JCTTDR15*	150			1.7								
MHL1JCTTDR22*	220			2.0								

\*Add tolerance character (S, J)

\*\* The operating temperature range of the coil (ambient temperature + self heating) must remain at +125°C or less

\*\*\* 50MHz

inductors

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