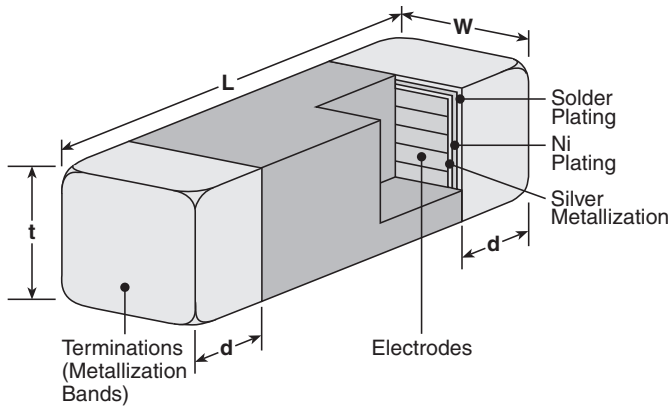


### features

- 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
- Standard EIA packages: 1E, 1J
- Nickel barrier with solder overcoat for excellent solderability
- Marking: Brown body color with no marking (1E)  
White body color with with black stripe and no marking (1J)
- Products with lead-free terminations meet RoHS requirements

Inductors

### dimensions and construction



Size Code	Dimensions inches (mm)			
	L	W	t	d
<b>1E</b> (0402)	.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</b> (0603)	.063±.006 (1.6±0.15)	.031±.006 (0.8±0.15)	.031±.006 (0.8±0.15)	.014±.006 (0.36±0.15)

### ordering information

New Part #	<b>MHL</b>	<b>1E</b>	<b>C</b>	<b>T</b>	<b>TE</b>	<b>3N9</b>	<b>S</b>
	Type	Size Code	Material	Termination Material	Packaging	Nominal Inductance	Tolerance
		1E 1J	Permeability Code: C T	T: Sn (Other termination styles available, contact factory for options)	TP: 7" paper tape 2 mm pitch (1E only - 10,000 pieces/reel) TD: 7" paper tape (1J - 4,000 pieces/reel)	3N9 = 3.9nH R10 = 100nH	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			Self Resonant Frequency Typical (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Operating Temperature Range					
			Minimum (100MHz)	Typical (100MHz)	Typical (800MHz)									
MHL1ECTTP1N0*	1.0	S: ±0.3nH	8	11	37	10000	0.12	300	-55°C to +125°C					
MHL1ECTTP1N2*	1.2				36									
MHL1ECTTP1N5*	1.5				34	6000	0.13							
MHL1ECTTP1N8*	1.8						0.14							
MHL1ECTTP2N2*	2.2						0.16							
MHL1ECTTP2N7*	2.7						0.17							
MHL1ECTTP3N3*	3.3				32	4000	0.19							
MHL1ECTTP3N9*	3.9						0.22							
MHL1ECTTP4N7*	4.7				J: ±5%	8	11			0.24	3900	0.32	200	-55°C to +125°C
MHL1ECTTP5N6*	5.6									0.27				
MHL1ECTTP6N8*	6.8	31	3200	0.37										
MHL1ECTTP8N2*	8.2			0.42										
MHL1ECTTP10N*	10			0.50										
MHL1ECTTP12N*	12			0.55										
MHL1ECTTP15N*	15	30	2000	0.65										
MHL1ECTTP18N*	18			0.8										
MHL1ECTTP22N*	22			1.0										
MHL1ECTTP27N*	27			1.2										
MHL1ECTTP33N*	33	J: ±5%	8	14	23	1100	1.3	180	-55°C to +125°C					
MHL1ECTTP39N*	39				900									
MHL1ECTTP47N*	47				21	750	1.4							
MHL1ECTTP56N*	56						1.6							
MHL1ECTTP68N*	68						1.6							
MHL1ECTTP82N*	82						1.6							
MHL1ECTTPR10*	100				10	10	—			600	1.6	100	-55°C to +125°C	
MHL1ECTTPR12*	120						—							
MHL1JCTTD1N5*	1.5				S: ±0.3nH	8	14			46	6000	0.10	1000	-55°C to +125°C
MHL1JCTTD1N8*	1.8													
MHL1JCTTD2N2*	2.2													
MHL1JCTTD2N7*	2.7													
MHL1JCTTD3N3*	3.3													
MHL1JCTTD3N9*	3.9													
MHL1JCTTD4N7*	4.7	10	10	46	4000	0.20	600	-55°C to +125°C						
MHL1JCTTD5N6*	5.6								0.23					
MHL1JCTTD6N8*	6.8								0.25					
MHL1JCTTD8N2*	8.2								0.28					
MHL1JCTTD10N*	10	J: ±5%	12	15	46	3200	0.30	600	-55°C to +125°C					
MHL1JCTTD12N*	12									0.35				
MHL1JCTTD15N*	15									0.40				
MHL1JCTTD18N*	18									0.45				
MHL1JCTTD22N*	22									0.50				
MHL1JCTTD27N*	27									0.55				
MHL1JCTTD27N*	27	18	18	15	46	1400	0.55	500	-55°C to +125°C					
MHL1JCTTD33N*	33									15				

\*Add tolerance character (S, J)

For complete environmental specifications, please refer to pages 209-210.

**applications and ratings (continued)**

Part Designation	Inductance L (nH)	Inductance Tolerance	Q			Self Resonant Frequency Typical (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Operating Temperature Range
			Minimum (100MHz)	Typical (100MHz)	Typical (800MHz)				
MHL1JCTTD39N*	39	J: ±5%	12	15	46	1100	0.65	500	-55°C to +125°C
MHL1JTTTD39N*	39			17					
MHL1JCTTD47N*	47			15	39	900	0.70		
MHL1JCTTD56N*	56				37		0.75		
MHL1JCTTD68N*	68				36	700	0.80		
MHL1JCTTD82N*	82			8	13	29	600		
MHL1JCTTDR10*	100		16			500	0.90		
MHL1JCTTDR12*	120		1.0						
MHL1JCTTDR15*	150		1.2						
MHL1JCTTDR18*	180		1.3						
MHL1JCTTDR22*	220		1.5						
			400						

\*Add tolerance character (S, J)

For complete environmental specifications, please refer to pages 209-210.