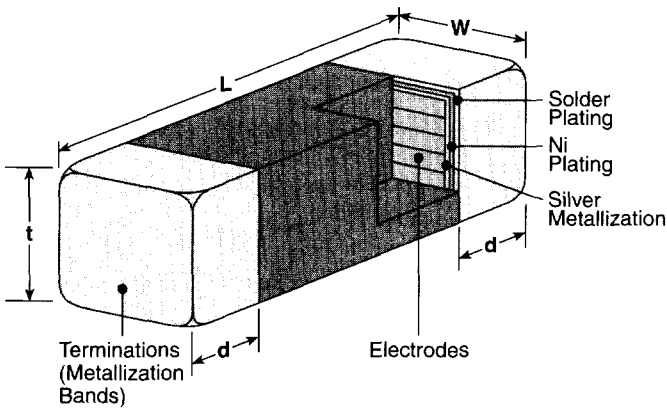


**features**

- 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, 2A
- 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)  
White body color with no marking (2A)

**dimensions and construction**



Size Code	Dimensions (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)	.012±.006 (0.30±0.15)
<b>2A</b> (0805)	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.035±.008 (0.9±0.2)	.02±.012 (0.50±0.3)

Inductors

**ordering information**

Old Part #	MH	0003	C		TE	3N9	S
New Part #	MHL	1E	C	L	TE	3N9	S
	Type	Size Code	Material	Termination Material	Packaging	Nominal Inductance	Tolerance
		1E 1J 2A	Permeability Code: C	L: SnPb T: Sn	T: 7" paper tape (1E only - 10,000 pieces/reel) TE: 7" embossed plastic TEB: 13" embossed plastic (1J, 2A - 4,000 pieces/reel)	3N9 = 3.9µH R10 = 100µH	S: ±0.3nH J: ±5%

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

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

**applications and ratings**

Part Designation	Inductance L (µH)	Inductance Tolerance	D			Self Resonant Frequency Typical (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Operating Temperature Range	
			Minimum (µm)	Typical (µm)	Typical (mm)					
MHL1EC*T1N0**	1.0	S: ±0.3nH	8	11	34	>15000	0.12	300	-40°C to +125°C	
MHL1EC*T1N2**	1.2									
MHL1EC*T1N5**	1.5									
MHL1EC*T1N8**	1.8									
MHL1EC*T2N2**	2.2									
MHL1EC*T2N7**	2.7			10	28	29	12000			0.16
MHL1EC*T3N3**	3.3					9500	0.17			
MHL1EC*T3N9**	3.9					8500	0.19			
MHL1EC*T4N7**	4.7					7000	0.22			
MHL1EC*T5N6**	5.6					6000	0.24			
MHL1EC*T6N8**	6.8	J: ±5%	8	11	30	3700	0.42	250	-40°C to +125°C	
MHL1EC*T8N2**	8.2									
MHL1EC*T10N**	10									
MHL1EC*T12N**	12									
MHL1EC*T15N**	15									
MHL1EC*T18N**	18			11	31	3200	0.50			
MHL1EC*T22N**	22									
MHL1EC*T27N**	27									
MHL1EC*T33N**	33									
MHL1EC*T39N**	39							9		9
MHL1EC*T47N**	47									
MHL1EC*T56N**	56									
MHL1EC*T68N**	68									
MHL1EC*T82N**	82									
MHL1EC*TR10**	100									
MHL1JC*TE1N0**	1.0	S: ±0.3nH	8	12	40	>17000	0.10	300	-40°C to +125°C	
MHL1JC*TE1N2**	1.2									
MHL1JC*TE1N5**	1.5									
MHL1JC*TE1N8**	1.8									
MHL1JC*TE2N2**	2.2									
MHL1JC*TE2N7**	2.7			13	41	8600	6500			0.12
MHL1JC*TE3N3**	3.3									
MHL1JC*TE3N9**	3.9									
MHL1JC*TE4N7**	4.7									
MHL1JC*TE5N6**	5.6									
MHL1JC*TE6N8**	6.8									
MHL1JC*TE8N2**	8.2									
MHL1JC*TE10N**	10									
MHL1JC*TE12N**	12	15	43	3700	4500	0.22				
MHL1JC*TE15N**	15									
MHL1JC*TE18N**	18									
MHL1JC*TE22N**	22									
MHL1JC*TE27N**	27						16	44	2000	3200
MHL1JC*TE33N**	33									

\* Add termination material character (L, T)  
\*\* Add tolerance character (S, J)

For complete environmental specifications, please refer to pages 108-109.

**applications and ratings (continued)**

Part Designation	Inductance L (µH)	Inductance Tolerance	Q			Self Resonant Frequency Typical (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	Operating Temperature Range		
			Minimum (100kHz)	Typical (100kHz)	Typical (1MHz)						
MHL1JC*TE39N**	39	J: ±5%	8	17	40	1500	0.60	300	-40°C to +125°C		
MHL1JC*TE47N**	47				35	1200	0.70				
MHL1JC*TE56N**	56			15	12	1100	0.75				
MHL1JC*TE68N**	68				5	1000	0.85				
MHL1JC*TE82N**	82				850	0.95					
MHL1JC*TER10**	100			14	—	750	1.2			300	-40°C to +125°C
MHL1JC*TER12**	120					700	1.3				
MHL1JC*TER15**	150					650	1.4				
MHL1JC*TER18**	180					550	1.5				
MHL1JC*TER22**	220					450	1.7				
MHL2AC*TE1N5**	1.5			S: ±0.3nH	10	18	60			>6000	0.10
MHL2AC*TE1N8**	1.8	55									
MHL2AC*TE2N2**	2.2	16	53			5600	0.15				
MHL2AC*TE2N7**	2.7		54					0.20			
MHL2AC*TE3N3**	3.3		5500					0.23			
MHL2AC*TE3N9**	3.9	18	60			4700	0.25				
MHL2AC*TE4N7**	4.7					3900	0.28				
MHL2AC*TE5N6**	5.6	20	60			3100	0.30				
MHL2AC*TE6N8**	6.8					2800	0.35				
MHL2AC*TE8N2**	8.2					2400	0.40				
MHL2AC*TE10N**	10					2100	0.45				
MHL2AC*TE12N**	12	22	60	2000	0.50						
MHL2AC*TE15N**	15			1800	0.55						
MHL2AC*TE18N**	18	23	—	56	1700	0.60					
MHL2AC*TE22N**	22			55	1400	0.65					
MHL2AC*TE27N**	27			47	1200	0.70					
MHL2AC*TE33N**	33	J: ±5%	10	23	43	1000	0.75	300	-40°C to +125°C		
MHL2AC*TE39N**	39				39	900	0.80				
MHL2AC*TE47N**	47			22	30	900	0.90				
MHL2AC*TE56N**	56				700	0.95					
MHL2AC*TE68N**	68				600	1.0					
MHL2AC*TE82N**	82			20	—	500	1.1				
MHL2AC*TER10**	100					430	1.2				
MHL2AC*TER12**	120			19	—	400	1.3				
MHL2AC*TER15**	150					340	1.5				
MHL2AC*TER18**	180					320	1.6				
MHL2AC*TER22**	220			18	—	270	1.6				
MHL2AC*TER27**	270	250	1.8								
MHL2AC*TER33**	330	17	—	230	2.5						
MHL2AC*TER39**	390			180	3.0						
MHL2AC*TER47**	470	16	—	180	3.0						
MHL2AC*TER56**	560			180	3.0						
MHL2AC*TER68**	680	180	3.0								

\* Add termination material character (L, T)  
\*\* Add tolerance character (S, J)

For complete environmental specifications, please refer to pages 108-109.