

## Multilayer Ceramic Inductors (Sn/Pb Terminations)

### Features

- Monolithic structure with high reliability
- Standard EIA/EIAJ chip sizes such as 0402/1005 and 0603/1608
- High quality ceramic material and unique manufacturing processes providing high Q at high frequencies and high self-resonant frequencies
- Superior termination bonding strength
- Nickel barrier with Sn/Pb solder overplated termination offering excellent solderability and solder leach resistance, suitable for both wave and reflow soldering processes

### Applications

- High frequency equipment including cellular phones, pagers, radar detectors, computer communications, etc

### Recommended PC Board Land Patterns

CHIP SIZE EIA/EIAJ	L INCH (mm)	G INCH (mm)	H INCH (mm)
0402(1005)	0.063 (1.60)	0.016 (0.40)	0.024 (0.60)
0603(1608)	0.102 (2.60)	0.022 (0.55)	0.037 (0.94)

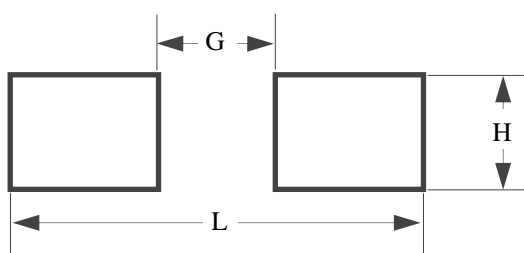
### Operating Temperature

-40°C — +125°C

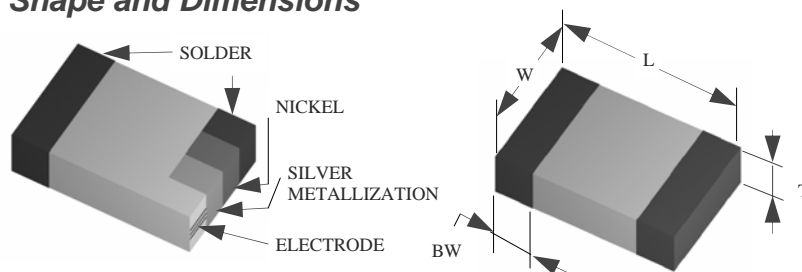
### Product Identification

MHI 0603 C 1N8 S T - PB  
(1) (2) (3) (4) (5) (6) (7)

- (1) Series code :  
MHI: Multilayer Ceramic Inductor
- (2) Dimensions: L x W inches  
The first two digits: L (length)  
The last two digits: W (width)
- (3) Characteristic code: C
- (4) Value code: Inductance  
N — decimal point for nH  
Example: 1N8 = 1.8 nH  
R — decimal point for  $\mu$ H (1000 nH)  
Example: R12 = 0.12  $\mu$ H = 120 nH
- (5) Tolerance code:  
J =  $\pm 5\%$   
K =  $\pm 10\%$   
S =  $\pm 0.3$  nH
- (6) Package code:  
T = Tape & Reel  
B = Bulk
- (7) Termination plating code:  
PB=Sn/Pb plating



### Shape and Dimensions



SIZE EIA/EIAJ	LENGTH (L) INCH (mm)	WIDTH (W) INCH (mm)	THICKNESS (T) INCH (mm)	TERMINATION (BW) INCH (mm)
0402/1005	0.039 $\pm$ 0.004 (1.00 $\pm$ 0.10)	0.020 $\pm$ 0.004 (0.50 $\pm$ 0.10)	0.020 $\pm$ 0.004 (0.50 $\pm$ 0.10)	0.010 $\pm$ 0.004 (0.25 $\pm$ 0.10)
0603/1608	0.063 $\pm$ 0.006 (1.60 $\pm$ 0.15)	0.031 $\pm$ 0.006 (0.80 $\pm$ 0.15)	0.031 $\pm$ 0.006 (0.80 $\pm$ 0.15)	0.014 $\pm$ 0.006 (0.36 $\pm$ 0.15)

## MHI Series (High Frequency)

<i>AEM Part Number</i>	<i>L, nH</i>	<i>Tolerance</i>	<i>Min.Q</i>	<i>Typ. Q @100 MHz</i>	<i>Typ. Q @800 MHz</i>	<i>Test Frequency MHz</i>	<i>Min. SRF MHz</i>	<i>Max. R<sub>DC</sub> Ω</i>	<i>Max. I A</i>
MHI0402C1N0	1.0	S	8	11	40	100	8000	0.12	0.30
MHI0402C1N2	1.2	S	8	11	36	100	8000	0.12	0.30
MHI0402C1N5	1.5	S	8	11	36	100	8000	0.13	0.30
MHI0402C1N8	1.8	S	8	11	35	100	6000	0.14	0.30
MHI0402C2N2	2.2	S	8	11	33	100	6000	0.16	0.30
MHI0402C2N7	2.7	S	8	11	33	100	6000	0.20	0.30
MHI0402C3N3	3.3	S, K	8	11	33	100	6000	0.22	0.30
MHI0402C3N9	3.9	S, K	8	11	31	100	4000	0.25	0.30
MHI0402C4N7	4.7	S, K	8	11	30	100	4000	0.28	0.30
MHI0402C5N6	5.6	S, K	8	11	30	100	4000	0.30	0.30
MHI0402C6N8	6.8	J, K	8	11	30	100	3900	0.35	0.30
MHI0402C8N2	8.2	J, K	8	11	30	100	3500	0.40	0.30
MHI0402C10N	10	J, K	8	11	30	100	3200	0.45	0.30
MHI0402C12N	12	J, K	8	11	28	100	2600	0.50	0.25
MHI0402C15N	15	J, K	8	11	28	100	2300	0.55	0.25
MHI0402C18N	18	J, K	8	11	27	100	2000	0.65	0.25
MHI0402C22N	22	J, K	8	11	26	100	1600	0.80	0.20
MHI0402C27N	27	J, K	8	11	26	100	1400	0.90	0.20
MHI0402C33N	33	J, K	8	11	24	100	1200	1.10	0.20
MHI0402C39N	39	J, K	8	11	20	100	1100	1.20	0.20
MHI0402C47N	47	J, K	8	11	18	100	900	1.30	0.20
MHI0402C56N	56	J, K	8	11	18	100	750	1.40	0.18
MHI0402C68N	68	J, K	8	11	16	100	700	1.40	0.18
MHI0402C82N	82	J, K	8	10		100	600	1.60	0.12
MHI0402CR10	100	J, K	8	10		100	600	2.00	0.10

Other values may be available upon request.

Please add tolerance, packaging and termination type codes when ordering.

## MHI Series (for high frequency)

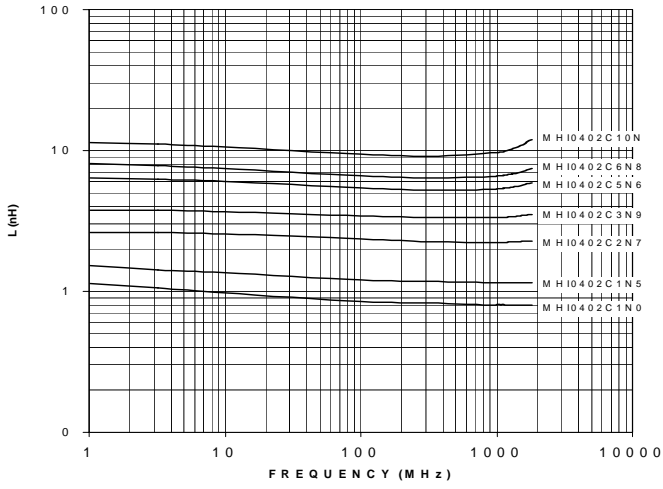
<i>AEM Part Number</i>	<i>L, nH</i>	<i>Tolerance</i>	<i>Min.Q</i>	<i>Typ. Q @100 MHz</i>	<i>Typ. Q @800 MHz</i>	<i>Test Frequency MHz</i>	<i>Min. SRF MHz</i>	<i>Max. R<sub>DC</sub> Ω</i>	<i>Max. I A</i>
MHI0603C1N5	1.5	S	8	14	46	100	6000	0.10	0.50
MHI0603C1N8	1.8	S	8	14	46	100	6000	0.12	0.50
MHI0603C2N2	2.2	S	8	14	46	100	6000	0.16	0.50
MHI0603C2N7	2.7	S	8	14	46	100	6000	0.20	0.40
MHI0603C3N3	3.3	S, K	10	14	46	100	5000	0.22	0.40
MHI0603C3N9	3.9	S, K	10	14	46	100	4500	0.25	0.30
MHI0603C4N7	4.7	S, K	10	14	46	100	4000	0.28	0.30
MHI0603C5N6	5.6	S, K	10	14	46	100	4000	0.29	0.30
MHI0603C6N8	6.8	J, K	10	15	46	100	3500	0.30	0.30
MHI0603C8N2	8.2	J, K	10	15	46	100	3000	0.33	0.30
MHI0603C10N	10	J, K	12	15	46	100	2000	0.35	0.30
MHI0603C12N	12	J, K	12	15	46	100	1800	0.40	0.30
MHI0603C15N	15	J, K	12	15	46	100	1500	0.45	0.30
MHI0603C18N	18	J, K	12	15	46	100	1500	0.50	0.25
MHI0603C22N	22	J, K	12	15	46	100	1300	0.55	0.25
MHI0603C27N	27	J, K	12	15	46	100	1200	0.60	0.25
MHI0603C33N	33	J, K	12	15	46	100	1000	0.65	0.25
MHI0603C39N	39	J, K	12	15	46	100	1000	0.70	0.25
MHI0603C47N	47	J, K	12	15	39	100	800	0.90	0.20
MHI0603C56N	56	J, K	12	15	37	100	700	1.00	0.20
MHI0603C68N	68	J, K	12	15	36	100	650	1.20	0.20
MHI0603C82N	82	J, K	12	15	29	100	600	1.50	0.20
MHI0603CR10	100	J, K	12	15	16	100	550	1.70	0.20
MHI0603CR12	120	J, K	8	13	16	50	500	2.00	0.15
MHI0603CR15	150	J, K	8	13		50	500	2.40	0.15
MHI0603CR18	180	J, K	8	13		50	400	2.70	0.15
MHI0603CR22	220	J, K	8	13		50	400	2.80	0.15

Other values may be available upon request.

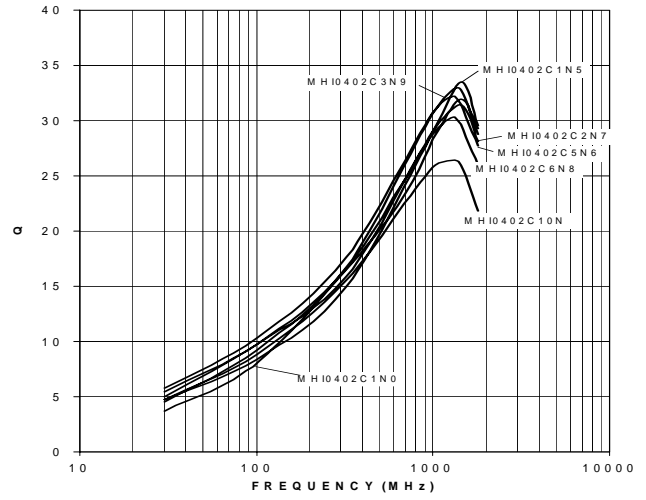
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**Typical Electrical Characteristics**  
 (Curves not listed are available upon request)

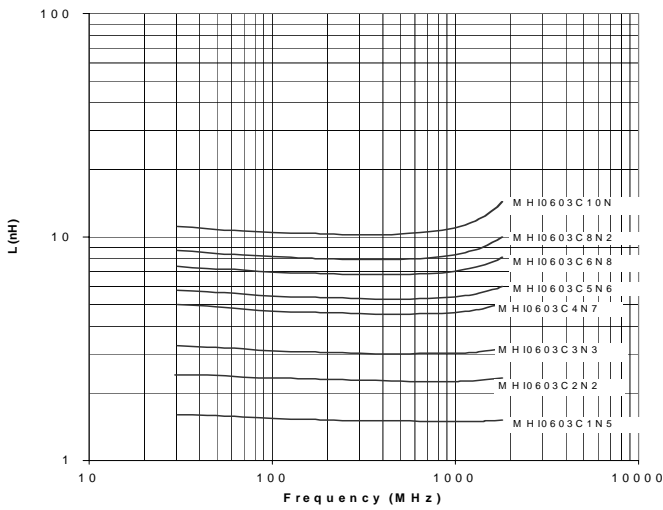
**MHI0402 SERIES**



**MHI0402 Series**



**MHI0603 Series**



**MHI0603 Series**

