

Multilayer Ceramic Inductors

Features

- Monolithic structure with high reliability
- Standard EIA/EIAJ chip sizes such as 0402/1005, 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 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)

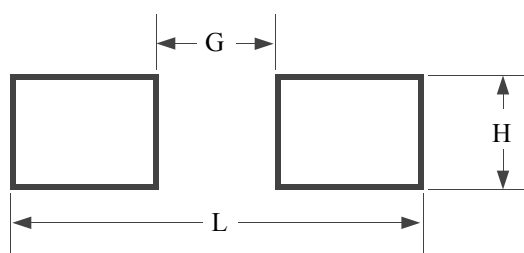
Operating Temperature

-40°C — +125°C

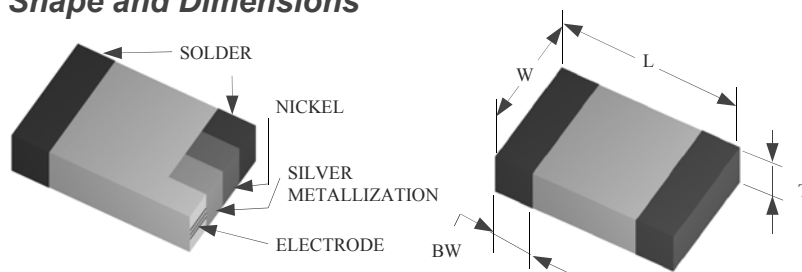
Product Identification

MHI 0603 C 1N8 J I - I
(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 μ H (1000 nH)
Example: R12 = 0.12 μ H = 120 nH
- (5) Tolerance code:
S = ± 0.3 nH
J = $\pm 5\%$
K = $\pm 10\%$
- (6) Package code:
T = Tape & Reel
B = Bulk
- (7) Termination plating code:
T = 100% Sn Plated Terminations
(must be specified as Sn/Pb plating no longer available.)



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)	0.008 \pm 0.004 (0.20 \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)	0.016 \pm 0.008 (0.40 \pm 0.20)

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_{DC} Ω</i>	<i>Max. I A</i>
MHI0402C1N0	1.0	S	8	11	37	100	10000	0.12	0.3
MHI0402C1N2	1.2	S	8	11	36	100	10000	0.12	0.3
MHI0402C1N5	1.5	S	8	11	36	100	6000	0.13	0.3
MHI0402C1N8	1.8	S	8	11	34	100	6000	0.14	0.3
MHI0402C2N2	2.2	S	8	11	34	100	6000	0.16	0.3
MHI0402C2N7	2.7	S	8	11	34	100	6000	0.17	0.3
MHI0402C3N3	3.3	S, K	8	11	34	100	6000	0.19	0.3
MHI0402C3N9	3.9	S, K	8	11	32	100	4000	0.22	0.3
MHI0402C4N7	4.7	S, K	8	11	32	100	4000	0.24	0.3
MHI0402C5N6	5.6	S, K	8	11	32	100	4000	0.27	0.3
MHI0402C6N8	6.8	J, K	8	11	32	100	3900	0.32	0.3
MHI0402C8N2	8.2	J, K	8	11	32	100	3500	0.37	0.3
MHI0402C10N	10	J, K	8	11	31	100	3200	0.42	0.3
MHI0402C12N	12	J, K	8	11	31	100	2600	0.50	0.3
MHI0402C15N	15	J, K	8	11	30	100	2300	0.55	0.3
MHI0402C18N	18	J, K	8	11	30	100	2000	0.65	0.3
MHI0402C22N	22	J, K	8	11	30	100	1600	0.80	0.3
MHI0402C27N	27	J, K	8	11	28	100	1400	0.90	0.3
MHI0402C33N	33	J, K	8	11	26	100	1200	1.0	0.2
MHI0402C39N	39	J, K	8	11	24	100	1100	1.2	0.2
MHI0402C47N	47	J, K	8	11	23	100	900	1.3	0.2
MHI0402C56N	56	J, K	8	11	21	100	750	1.4	0.2
MHI0402C68N	68	J, K	8	11	19	100	750	1.4	0.18
MHI0402C82N	82	J, K	8	10	16	100	600	1.6	0.15
MHI0402CR10	100	J, K	8	10		100	600	1.6	0.1
MHI0402CR12	120	J, K	8	10		100	600	1.6	0.1

Other values may be available upon request.

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

MHI Series (for high frequency)

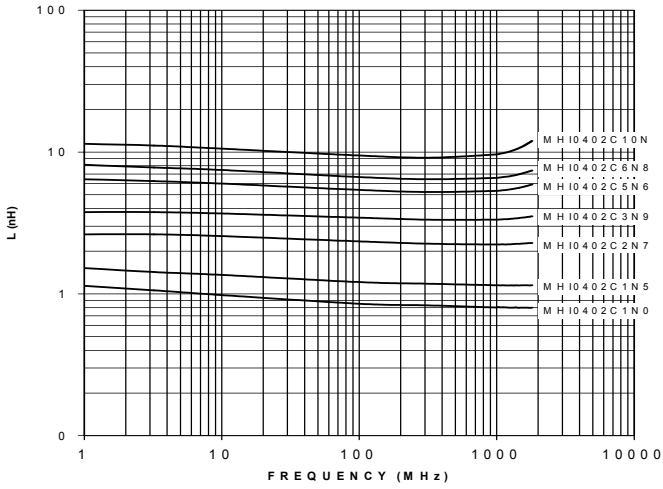
AEM Part Number	L, nH	Tolerance	Min.Q	Typ. Q @100 MHz	Typ. Q @800 MHz	Test Frequency MHz	Min. SRF MHz	Max. R _{DC} Ω	Max. I A
MHI0603C1N5	1.5	S	8	14	46	100	6000	0.10	1.0
MHI0603C1N8	1.8	S	8	14	46	100	6000	0.10	1.0
MHI0603C2N2	2.2	S	8	14	46	100	6000	0.10	1.0
MHI0603C2N7	2.7	S	8	14	46	100	6000	0.10	1.0
MHI0603C3N3	3.3	S, K	10	14	46	100	6000	0.13	1.0
MHI0603C3N9	3.9	S, K	10	14	46	100	6000	0.15	1.0
MHI0603C4N7	4.7	S, K	10	14	46	100	4000	0.20	1.0
MHI0603C5N6	5.6	S, K	10	14	46	100	4000	0.23	0.6
MHI0603C6N8	6.8	J, K	10	15	46	100	4000	0.25	0.6
MHI0603C8N2	8.2	J, K	10	15	46	100	3500	0.28	0.6
MHI0603C10N	10	J, K	12	15	46	100	3200	0.30	0.6
MHI0603C12N	12	J, K	12	15	46	100	2600	0.35	0.6
MHI0603C15N	15	J, K	12	15	46	100	2300	0.40	0.6
MHI0603C18N	18	J, K	12	15	46	100	2000	0.45	0.6
MHI0603C22N	22	J, K	12	15	46	100	1600	0.50	0.6
MHI0603C27N	27	J, K	12	15	46	100	1400	0.55	0.6
MHI0603C33N	33	J, K	12	15	46	100	1200	0.60	0.6
MHI0603C39N	39	J, K	12	15	46	100	1100	0.65	0.5
MHI0603C47N	47	J, K	12	15	39	100	900	0.70	0.5
MHI0603C56N	56	J, K	12	15	37	100	900	0.75	0.5
MHI0603C68N	68	J, K	12	15	36	100	700	0.80	0.4
MHI0603C82N	82	J, K	12	15	29	100	600	0.85	0.3
MHI0603CR10	100	J, K	12	15	16	100	600	0.90	0.3
MHI0603CR12	120	J, K	8	15	16	50	500	1.00	0.3
MHI0603CR15	150	J, K	8	13		50	500	1.20	0.3
MHI0603CR18	180	J, K	8	13		50	400	1.30	0.3
MHI0603CR22	220	J, K	8	13		50	400	1.50	0.3

Other values may be available upon request.

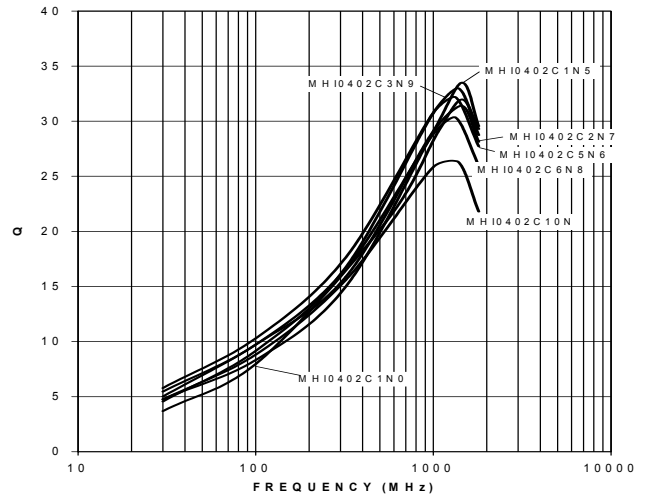
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Typical Electrical Characteristics
 (Curves not listed are available upon request)

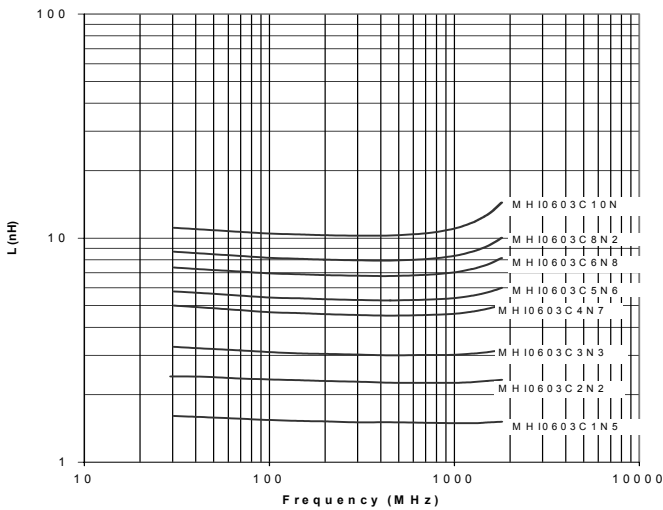
MHI0402 SERIES



MHI0402 Series



MHI0603 Series



MHI0603 Series

