

Multilayer Ferrite Inductors

Features

- Monolithic structure for closed magnetic path eliminating crosstalk and providing high reliability in wide temperature and humidity range
- Standard EIA/EIAJ chip sizes such as 0603/1608, 0805/2012, and 1206/3216
- Superior termination bonding strength
- Nickel barrier with solder overlated termination offering excellent solderability and solder leach resistance, suitable for both wave and reflow soldering processes

Applications

- Prevention of electromagnetic interference to signal for high density circuits in disk drives, personal computers, measuring equipment, and telephone equipment

Recommended PC Board Land Patterns

CHIP SIZE EIA/EIAJ	L INCH (mm)	G INCH (mm)	H NCH (mm)
0603(1608)	0.102 (2.60)	0.022 (0.55)	0.037 (0.94)
0805(2012)	0.118 (3.00)	0.026 (0.66)	0.057 (1.45)
1206(3216)	0.173 (4.40)	0.059 (1.50)	0.071 (1.80)

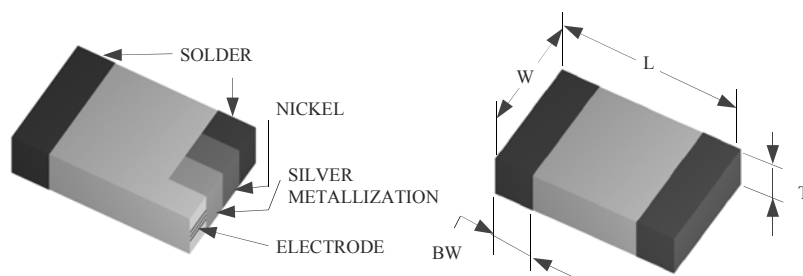
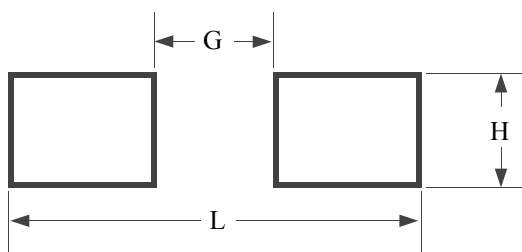
Operating Temperature

-25°C — +85°C

Product Identification

MCI 0603 J 152 K I - I
 (1) (2) (3) (4) (5) (6) (7)

- (1) Series code:
MCI: Multilayer Ferrite Inductor
- (2) Dimensions: L x W inches
The first two digits: L (length)
The last two digits: W (width)
- (3) Characteristic code: H, J
- (4) Value code: Inductance (nH)
The first two digits are significant. The last digit specifies the number of zeros to follow.
- (5) Tolerance code:
K = ±10%
M = ±20%
- (6) Package code:
T = Tape & Reel
B = Bulk
- (7) Termination type code:
T = 100% Sn Plated (Lack of this code defaults to Sn/Pb plated termination)



Shape and Dimensions

CHIP SIZE EIA/EIAJ	LENGTH (L) INCH (mm)	WIDTH (W) INCH (mm)	THICKNESS (T) INCH (mm)	TERMINATION (BW) INCH (mm)
0603/1608	0.063 ± 0.006 (1.60 ± 0.15)	0.031 ± 0.006 (0.80 ± 0.15)	0.031 ± 0.006 (0.80 ± 0.15)	0.014 ± 0.006 (0.36 ± 0.15)
0805/2012	0.079 ± 0.008 (2.00 ± 0.20)	0.049 ± 0.008 (1.25 ± 0.20)	<2.7µH 0.035 ± 0.008 (0.90 ± 0.20) ≥2.7µH 0.049 ± 0.008 (1.25 ± 0.20)	0.020 ± 0.010 (0.51 ± 0.25)
1206/3216	0.126 ± 0.008 (3.20 ± 0.20)	0.063 ± 0.008 (1.60 ± 0.20)	0.043 ± 0.08 (1.10 ± 0.20)	0.020 ± 0.010 (0.51 ± 0.25)

MCI Series (General Use)

<i>AEM Part Number</i>	<i>L μH</i>	<i>Tolerance</i>	<i>Min. Q</i>	<i>Test Frequency MHz</i>	<i>Min. SRF MHz</i>	<i>Max. R_{DC} Ω</i>	<i>Max. I A</i>
MCI0603H470	0.047	M	10	50	260	0.30	0.05
MCI0603H680	0.068	M	10	50	250	0.30	0.05
MCI0603H820	0.082	M	10	50	245	0.30	0.05
MCI0603H101	0.10	K, M	15	25	240	0.50	0.05
MCI0603H121	0.12	K, M	15	25	205	0.50	0.05
MCI0603H151	0.15	K, M	15	25	180	0.60	0.05
MCI0603H181	0.18	K, M	15	25	165	0.60	0.05
MCI0603H221	0.22	K, M	15	25	150	0.80	0.05
MCI0603H271	0.27	K, M	15	25	136	0.80	0.05
MCI0603H331	0.33	K, M	15	25	125	0.85	0.035
MCI0603H391	0.39	K, M	15	25	110	1.00	0.035
MCI0603H471	0.47	K, M	15	25	105	1.35	0.035
MCI0603H561	0.56	K, M	15	25	95	1.55	0.035
MCI0603H681	0.68	K, M	15	25	90	1.70	0.035
MCI0603H821	0.82	K, M	15	25	85	2.10	0.035
MCI0603J102	1.0	K, M	35	10	75	0.60	0.025
MCI0603J122	1.2	K, M	35	10	65	0.80	0.025
MCI0603J152	1.5	K, M	35	10	60	0.80	0.025
MCI0603J182	1.8	K, M	35	10	55	0.95	0.025
MCI0603J222	2.2	K, M	35	10	50	1.15	0.015
MCI0603J272	2.7	K, M	35	10	45	1.35	0.015
MCI0603J332	3.3	K, M	35	10	40	1.55	0.015
MCI0603J392	3.9	K, M	35	10	35	1.70	0.015
MCI0603J472	4.7	K, M	35	10	33	2.10	0.015
MCI0603J562	5.6	K, M	35	4	22	1.55	0.005
MCI0603J682	6.8	K, M	35	4	20	1.70	0.005
MCI0603J822	8.2	K, M	35	4	18	2.10	0.005
MCI0603J103	10	K, M	30	2	17	1.85	0.003
MCI0603J123	12	K, M	30	2	15	2.10	0.003

Other values may be available upon request.

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

MCI Series (General Use)

<i>AEM Part Number</i>	<i>L μH</i>	<i>Tolerance</i>	<i>Min. Q</i>	<i>Test Frequency MHz</i>	<i>Min. SRF MHz</i>	<i>Max. R_{DC} Ω</i>	<i>Max. I A</i>
MCI0805H470	0.047	M	15	50	320	0.20	0.30
MCI0805H680	0.068	M	15	50	280	0.20	0.30
MCI0805H820	0.082	M	15	50	255	0.20	0.30
MCI0805H101	0.1	K, M	20	25	235	0.30	0.25
MCI0805H121	0.12	K, M	20	25	220	0.30	0.25
MCI0805H151	0.15	K, M	20	25	200	0.40	0.25
MCI0805H181	0.18	K, M	20	25	185	0.40	0.25
MCI0805H221	0.22	K, M	20	25	170	0.50	0.25
MCI0805H271	0.27	K, M	20	25	150	0.50	0.25
MCI0805H331	0.33	K, M	20	25	145	0.55	0.25
MCI0805H391	0.39	K, M	25	25	135	0.65	0.20
MCI0805H471	0.47	K, M	25	25	125	0.65	0.20
MCI0805H561	0.56	K, M	25	25	115	0.75	0.15
MCI0805H681	0.68	K, M	25	25	105	0.80	0.15
MCI0805H821	0.82	K, M	25	25	100	1.00	0.15
MCI0805J102	1.0	K, M	45	10	75	0.40	0.05
MCI0805J122	1.2	K, M	45	10	65	0.50	0.05
MCI0805J152	1.5	K, M	45	10	60	0.50	0.05
MCI0805J182	1.8	K, M	45	10	55	0.60	0.05
MCI0805J222	2.2	K, M	45	10	50	0.65	0.03
MCI0805J272	2.7	K, M	45	10	45	0.75	0.03
MCI0805J332	3.3	K, M	45	10	41	0.80	0.03
MCI0805J392	3.9	K, M	45	10	38	0.90	0.03
MCI0805J472	4.7	K, M	45	10	35	1.00	0.03
MCI0805J562	5.6	K, M	50	4	32	0.90	0.015
MCI0805J682	6.8	K, M	50	4	29	1.00	0.015
MCI0805J822	8.2	K, M	50	4	26	1.10	0.015
MCI0805J103	10	K, M	50	2	24	1.15	0.015

Other values may be available upon request.

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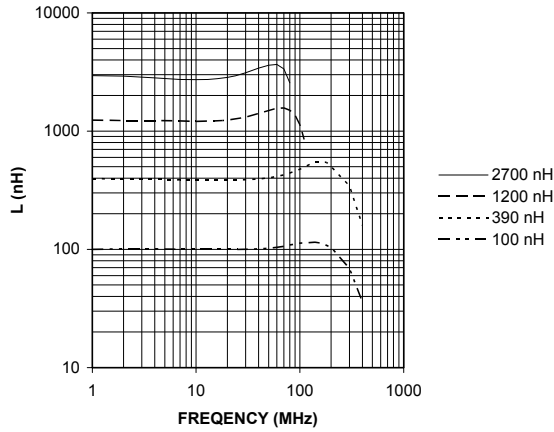
MCI Series (General Use)

<i>AEM Part Number</i>	<i>L μH</i>	<i>Tolerance</i>	<i>Min. Q</i>	<i>Test Frequency MHz</i>	<i>Min. SRF MHz</i>	<i>Max. R_{DC} Ω</i>	<i>Max. I A</i>
MCI1206H470	0.047	M	20	50	320	0.15	0.30
MCI1206H680	0.068	M	20	50	280	0.25	0.30
MCI1206H101	0.1	K, M	20	25	235	0.25	0.25
MCI1206H121	0.12	K, M	20	25	220	0.30	0.25
MCI1206H151	0.15	K, M	20	25	200	0.30	0.25
MCI1206H181	0.18	K, M	20	25	185	0.40	0.25
MCI1206H221	0.22	K, M	20	25	170	0.40	0.25
MCI1206H271	0.27	K, M	20	25	150	0.50	0.25
MCI1206H331	0.33	K, M	20	25	145	0.60	0.25
MCI1206H391	0.39	K, M	25	25	135	0.50	0.20
MCI1206H471	0.47	K, M	25	25	125	0.60	0.20
MCI1206H561	0.56	K, M	25	25	115	0.70	0.15
MCI1206H681	0.68	K, M	25	25	105	0.80	0.15
MCI1206H821	0.82	K, M	25	25	100	0.90	0.15
MCI1206J102	1	K, M	45	10	75	0.40	0.10
MCI1206J122	1.2	K, M	45	10	65	0.50	0.10
MCI1206J152	1.5	K, M	45	10	60	0.50	0.05
MCI1206J182	1.8	K, M	45	10	55	0.50	0.05
MCI1206J222	2.2	K, M	45	10	50	0.60	0.05
MCI1206J272	2.7	K, M	45	10	45	0.60	0.05
MCI1206J332	3.3	K, M	45	10	41	0.70	0.05
MCI1206J392	3.9	K, M	45	10	38	0.80	0.05
MCI1206J472	4.7	K, M	45	10	35	0.85	0.05
MCI1206J562	5.6	K, M	50	4	32	0.90	0.025
MCI1206J682	6.8	K, M	50	4	29	0.90	0.025
MCI1206J822	8.2	K, M	50	4	26	0.90	0.025
MCI1206J103	10	K, M	50	2	24	1.00	0.025
MCI1206J123	12	K, M	50	2	22	1.05	0.015
MCI1206J153	15	K, M	30	1	19	0.70	0.005
MCI1206J183	18	K, M	30	1	18	0.70	0.005
MCI1206J223	22	K, M	30	1	16	0.90	0.005
MCI1206J273	27	K, M	30	1	14	0.90	0.005
MCI1206J333	33	K, M	30	0.4	13	1.05	0.005

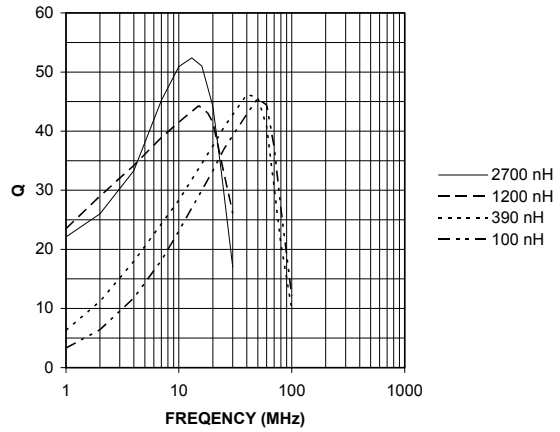
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Electrical Characteristics
 (Curves not listed are available upon request)

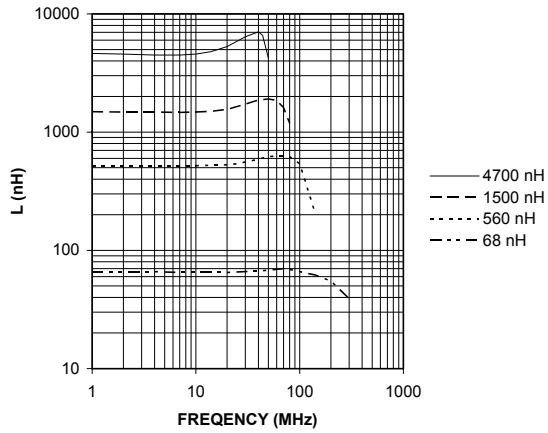
MCI 0603 SERIES



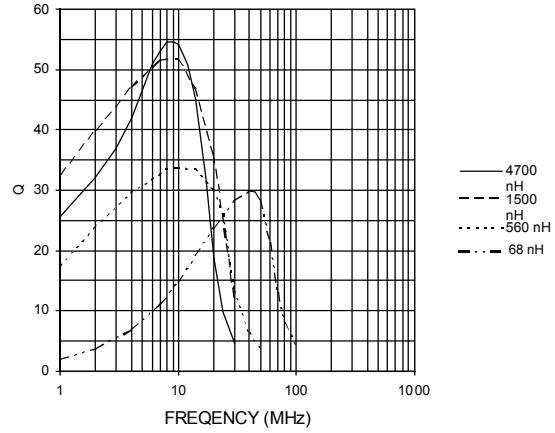
MCI 0603 SERIES



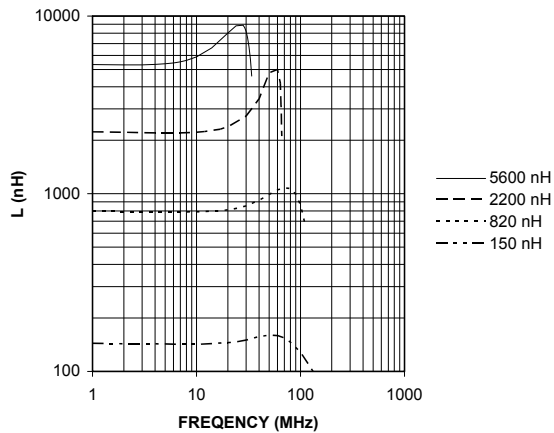
MCI 0805 SERIES



MCI 0805 SERIES



MCI 1206 SERIES



MCI 1206 SERIES

