

Multilayer Chip Inductor for Choke – MCL Series

Operating temp. : -40°C ~+125°C



FEATURES

- ◆ Monolithic structure for high reliability
- ◆ Excellent solderability and high heat resistance
- ◆ No cross coupling due to magnetic shield
- ◆ High DC bias current due to developed material
- ◆ Low DC resistance

APPLICATIONS

- ◆ Choke circuits in DC power line of consumer electronics such as Personal computers, mobile phones, tablets and smart home appliances

PRODUCT IDENTIFICATION

1	2	3	4	5	6
MCL	1608	S	1R0	M	T

1 Type	
MCL	Chip Inductor for Choke

2 External Dimensions (L×W) (mm)	
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25

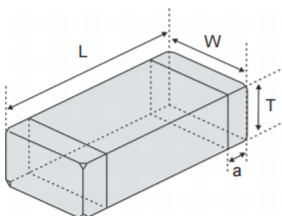
3 Feature Type	
S	Standard
H	Ir-Improved

4 Nominal Inductance	
Example	Nominal Value
1R0	1.0μH
※R=decimal point	

5 Inductance Tolerance	
M	±20%
N	±30%

6 Packing	
T	Tape & Reel

SHAPE AND DIMENSIONS



Type	L	W	T	a
MCL1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
MCL2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]
			1.25±0.2 [.049±.008]	

Unit: mm [inch]

SPECIFICATIONS MCL1608 TYPE

Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Max. Rated Current	Thickness
Units	μH	MHz	Ω		MHz	A	mm [inch]
Symbol	L	Freq.	DCR		S.R.F	Ir*	T
			Max.	Typ.			
MCL1608SR10 □ T	0.1	1	0.182	0.140	240	0.70	0.8±0.15 [.031±.006]
MCL1608SR22 □ T	0.22	1	0.351	0.270	150	0.55	
MCL1608SR47 □ T	0.47	1	0.546	0.420	105	0.40	
MCL1608S1R0 □ T	1.0	1	0.260	0.200	75	0.19	
MCL1608S2R2 □ T	2.2	1	0.520	0.400	50	0.14	
MCL1608S4R7 □ T	4.7	1	0.780	0.600	35	0.10	
MCL1608S100 □ T	10	1	1.170	0.900	20	0.05	

MCL2012 TYPE

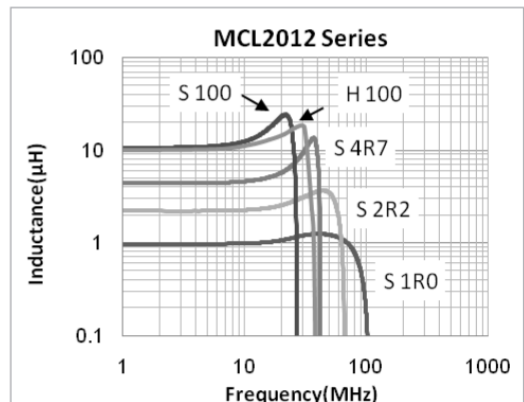
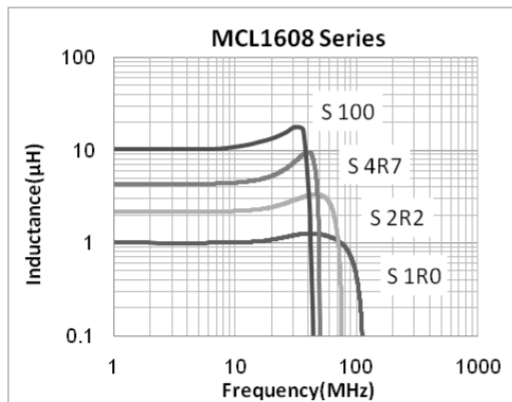
Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Max. Rated Current	Thickness
Units	μH	MHz	Ω		MHz	A	mm [inch]
Symbol	L	Freq.	DCR		S.R.F	Ir*	T
			Max.	Typ.			
MCL2012SR10 □ T	0.1	1	0.091	0.070	235	1.00	0.85±0.2 [.033±.008]
MCL2012SR22 □ T	0.22	1	0.169	0.130	170	0.80	
MCL2012SR47 □ T	0.47	1	0.234	0.180	125	0.55	
MCL2012S1R0 □ T	1.0	1	0.260	0.200	75	0.30	
MCL2012S2R2 □ T	2.2	1	0.364	0.280	50	0.22	
MCL2012S4R7 □ T	4.7	1	0.390	0.300	25	0.18	
MCL2012S100 □ T	10	1	0.650	0.500	15	0.06	1.25±0.2 [.049±.008]
MCL2012H100 □ T	10	1	0.650	0.500	20	0.10	

※ □: Please specify the inductance tolerance code (M=±20%,N=±30%);

※ *: The rated current is the value of DC current at which the inductance value is dropped within 50% with the application of DC bias.

TYPICAL ELECTRICAL CHARACTERISTICS

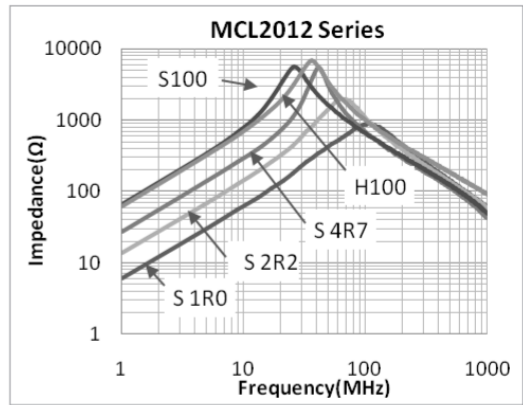
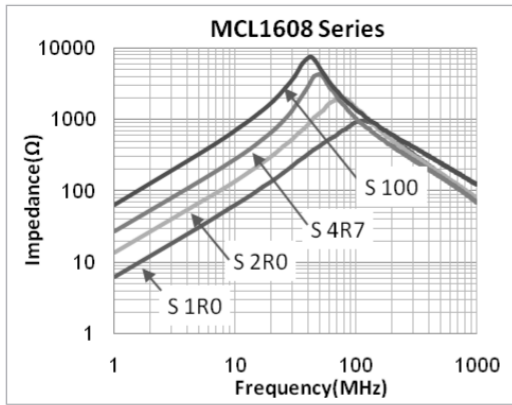
Inductance vs. Frequency Characteristics



Multilayer Chip Ferrite Inductor
Multilayer Chip Inductor for Choke
Multilayer Chip Power Inductor
Multilayer Ultra High Q Chip Ceramic Inductor
Multilayer High Q Chip Ceramic Inductor
Multilayer Chip Ceramic Inductor
Multilayer High Frequency Chip Ceramic Inductor
Wire Wound Chip Ferrite Inductor
SMD Power Inductor

TYPICAL ELECTRICAL CHARACTERISTICS

Impedance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics

