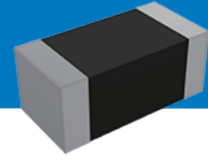


叠层片式扼流电感—MCL-N 系列

Multilayer Chip Inductor for Choke—MCL-N Series



工作温度
Operating Temp

◆ $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

特征 Features

- ◆ 迭层独石结构、高度可靠性
- ◆ 良好的可焊性和耐焊性
- ◆ 良好的磁屏蔽，无交叉耦合
- ◆ 通过磁体材料的改进，偏置电流大幅度提高
- ◆ 交流电阻，功率损耗大幅度降低
- ◆ 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 AC resistance, low power loss

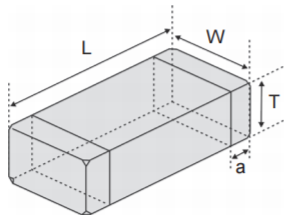
用途 Applications

- ◆ NFC 输出滤波和匹配电路，电源线等
- ◆ NFC output filtering and matching circuit, Power line, etc.

产品型号 Product Identification

1	2	3	4	5	6
MCL	1608	N	R16	J	T
1	分类 Type		2	外形尺寸 (L×W) (mm) External Dimensions (L×W) (mm)	
MCL		片式扼流电感 Chip Power Inductor		3	
				特性类别 Feature Type	
				N	
				NFC	
4	公称电感量 Nominal Inductance		5	电感公差 Inductance Tolerance	
Example		Nominal Value		J	
R16		0.16μH		±5%	
		※R= 小数点		K	
				±10%	
				M	
				±20%	
				6	包装 Packing
				T	
				编带 Tape & Reel	

外观尺寸 Shape and Dimensions



Unit mm [inch]				
Type	L	W	T	a
MCL1005N [0402]	1.0±0.15 [0.039±0.006]	0.5±0.15 [0.020±0.006]	0.5±0.15 [0.020±0.006]	0.25±0.1 [0.010±0.004]
MCL1608N [0603]	1.60±0.15 [0.063±0.006]	0.8±0.15 [0.031±0.006]	0.8±0.15 [0.031±0.006]	0.3±0.2 [0.012±0.008]
MCL1608N-A01 [0603]	1.60±0.15 [0.063±0.006]	0.8±0.15 [0.031±0.006]	0.55±0.1 [0.021±0.004]	0.3±0.2 [0.012±0.008]

规格特性 Specifications

MCL1005N TYPE

型号 Part Number	电感量 Inductance	L 测试频率 L Test Freq.	直流电阻 DC Resistance Max.	自谐频率 Min. Self-resonant Frequency	饱和电流 Saturation Current Typ.	温升电流 Heat Rating Current Max.
单位 Units	nH	MHz	Ω	MHz	mA	mA
符号 Symbol	L	Freq.	DCR	S.R.F	Isat	Irms
MCL1005N77N □ T	77	25	0.27	200	550	550
MCL1005N96N □ T	96	25	0.35	200	500	500
MCL1005NR10 □ T	100	25	0.35	200	500	500
MCL1005NR11 □ T	110	25	0.39	200	450	450
MCL1005NR12 □ T	120	25	0.39	200	450	450
MCL1005NR13 □ T	130	25	0.39	200	450	450
MCL1005NR14 □ T	140	25	0.45	200	450	450
MCL1005NR15 □ T	150	25	0.45	200	450	450
MCL1005NR16 □ T	160	25	0.52	200	550	400
MCL1005NR18 □ T	180	25	0.58	200	370	400
MCL1005NR20 □ T	200	25	0.58	200	370	400
MCL1005NR22 □ T	220	25	0.58	180	370	400
MCL1005NR27 □ T	270	25	0.65	180	350	350
MCL1005NR33 □ T	330	25	0.65	120	300	350
MCL1005NR39 □ T	390	25	0.97	120	300	300
MCL1005NR47 □ T	470	25	0.97	120	250	300
MCL1005NR56 □ T	560	25	1.40	120	250	250

MCL1608N TYPE

型号 Part Number	电感量 Inductance	L 测试频率 L Test Freq.	直流电阻 DC Resistance Max.	自谐频率 Min. Self-resonant Frequency	饱和电流 Saturation Current Typ.	温升电流 Heat Rating Current Max.
单位 Units	nH	MHz	Ω	MHz	mA	mA
符号 Symbol	L	Freq.	DCR	S.R.F	Isat	Irms
MCL1608N77N □ T	77	25	0.11	200	1100	1100
MCL1608N85N □ T	85	25	0.11	200	1100	1100
MCL1608NR10 □ T	100	25	0.12	200	1000	1000
MCL1608NR12 □ T	120	25	0.14	200	1000	800
MCL1608NR16 □ T	160	25	0.156	200	1100	700
MCL1608NR20 □ T	200	25	0.22	200	700	650
MCL1608NR21 □ T	210	25	0.26	200	700	600
MCL1608NR22 □ T	220	25	0.26	200	700	600
MCL1608NR27 □ T	270	25	0.286	200	650	550
MCL1608NR33 □ T	330	25	0.312	180	650	500
MCL1608NR39 □ T	390	25	0.36	180	600	450
MCL1608NR47 □ T	470	25	0.494	120	600	400
MCL1608NR56 □ T	560	25	0.52	120	550	400
MCL1608NR65 □ T	650	25	0.65	100	450	350
MCL1608NR82 □ T	820	25	0.75	80	400	300

MCL1608N-A01 TYPE

型号 Part Number	电感量 Inductance	L 测试频率 L Test Freq.	直流电阻 DC Resistance Max.	自谐频率 Min. Self-resonant Frequency	饱和电流 Saturation Current Typ.	温升电流 Heat Rating Current Max.
单位 Units	nH	MHz	Ω	MHz	mA	mA
符号 Symbol	L	Freq.	DCR	S.R.F	Isat	Irms
MCL1608NR16 □ TA01	160	25	0.156	300	550	700
MCL1608N2R2MTA01	2200	1	0.3	80	130 ^{Isat1}	800

※饱和电流: 电感值比无电流时下降约10%的直流电流。
※Isat: DC current at which the inductance drops approximate 10% from its value without current;

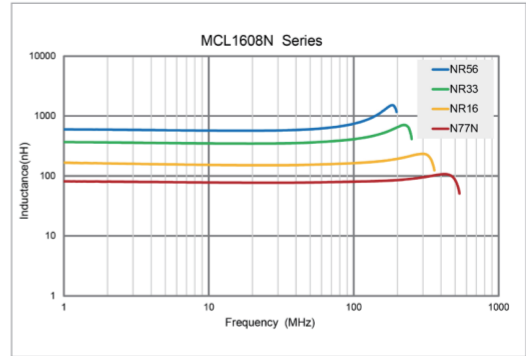
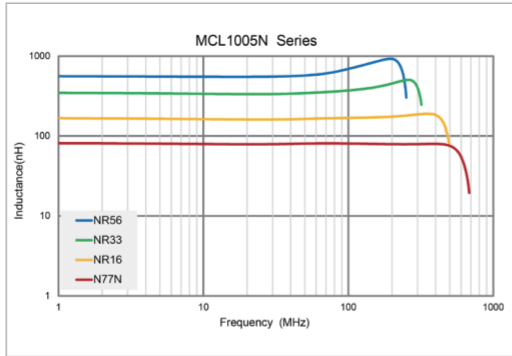
※温升电流: 使产品表面温度从20℃升高($\Delta T = 25^\circ\text{C}$)的直流电流值。
※Irms: DC current that causes the temperature rise ($\Delta T = 25^\circ\text{C}$) from 20°C ambient.

※□: 请指定电感量精度代码(J=±5%, K=±10%, M=±20%)。
※□: Please specify the inductance tolerance code (J=±5%, K=±10%, M=±20%).

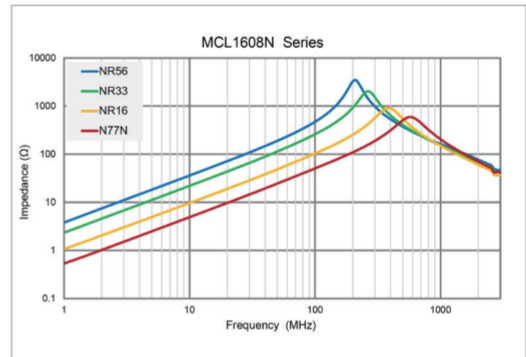
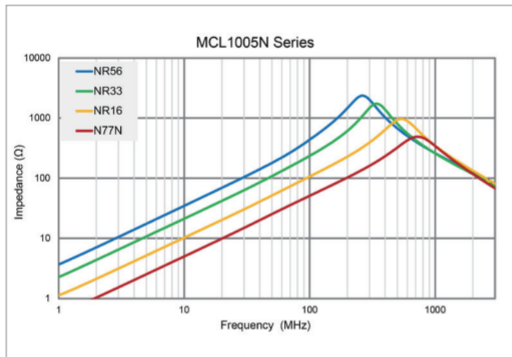
电气特性

Typical Electrical Characteristics

Inductance vs. Frequency Characteristics



Impedance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics

