Multilayer Chip Power Inductor – MCL-A Series

Operating Temp. : -40℃~+125℃

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

- DC-DC converter circuits for mobile phones, wearable devices, DVCs, HDDs, etc

PRODUCT IDENTIFICATION

MCL	2012	A	2R2	M	T
①	②	③	④	⑤	⑥

①

Type	
MCL	Chip Power Inductor

②

External Dimensions (L×W) (mm)	
2012 [0805]	2.0×1.25
2016 [0806]	2.0×1.6
2520 [1008]	2.5×2.0

③

Feature Type	
A	Inner Code

④

Nominal Inductance	
Example	Nominal Value
2R2	2.2μH
※R= decimal point	

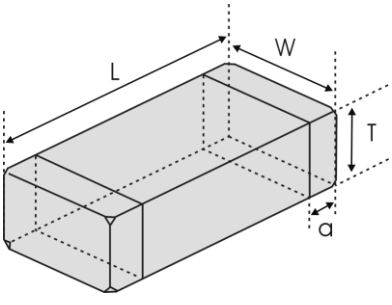
⑤

Inductance Tolerance	
M	±20%

⑥

包装 Packing	
T	编带 Tape & Reel

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
MCL2012-A [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]
MCL2016-A [0806]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.6±0.2 [.063±.008]	0.9±0.1 [.035±.004]	0.5±0.3 [.020±.012]
MCL2520-A [1008]	2.5±0.2 [.098±.008]	2.0(+0.3, -0.1) [.079(+.012, -.004)]	0.9±0.1 [.035±.004]	0.5±0.3 [.020±.012]

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SPECIFICATIONS

MCL2012A TYPE

Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Saturation Current Typ.	Heat Rating Current Max.
Units	μH	MHz	Ω		MHz	A	A
Symbol	L	Freq.	DCR		S.R.F	Isat	Irms
			Max.	Typ.			
MCL2012A1R0MT	1.0	1	0.150	0.120	120	0.45	1.45
MCL2012A1R5MT	1.5	1	0.187	0.150	90	0.35	1.35
MCL2012A2R2MT	2.2	1	0.225	0.180	70	0.30	1.30
MCL2012A3R3MT	3.3	1	0.312	0.250	55	0.21	0.90
MCL2012A4R7MT	4.7	1	0.375	0.300	50	0.18	0.85
MCL2012A100MT	10	1	0.500	0.400	35	0.15	0.40

MCL2016A TYPE

Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Saturation Current Typ.	Heat Rating Current Max.
Units	μH	MHz	Ω		MHz	A	A
Symbol	L	Freq.	DCR		S.R.F	Isat	Irms
			Max.	Typ.			
MCL2016A1R0MT	1.0	1	0.175	0.140	120	0.90	1.10
MCL2016A1R5MT	1.5	1	0.200	0.160	100	0.55	1.00
MCL2016A2R2MT	2.2	1	0.275	0.220	70	0.60	0.85
MCL2016A4R7MT	4.7	1	0.200	0.160	50	0.10	1.20

MCL2520A TYPE

Part Number	Inductance	L Test Freq.	DC Resistance		Min. Self-resonant Frequency	Saturation Current Typ.	Heat Rating Current Max.
Units	μH	MHz	Ω		MHz	A	A
Symbol	L	Freq.	DCR		S.R.F	Isat	Irms
			Max.	Typ.			
MCL2520A1R0MT	1.0	1	0.100	0.080	100	0.75	1.15
MCL2520A1R5MT	1.5	1	0.137	0.110	85	0.60	1.00
MCL2520A2R2MT	2.2	1	0.162	0.130	70	0.50	1.40
MCL2520A4R7MT	4.7	1	0.350	0.280	45	0.25	0.95

※Rated current: Isat or Irms, whichever is smaller;
※Isat: DC current at which the inductance drops approximate 30% from its value without current;
※Irms : DC current that causes the temperature rise (△T =40°C) from 20°C ambient.

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