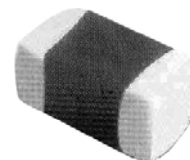


Multilayer Chip Power Inductor – MPL Series

Operating Temp. : -40℃~+85℃



FEATURES

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

APPLICATIONS

- DC-DC converter circuits for mobile phones, DSCs, DVCs, HDDs, PDAs, etc.

PRODUCT IDENTIFICATION

<u>MPL</u>	<u>2012</u>	<u>S</u>	<u>2R2</u>	<u>M</u>	<u>H</u>	<u>I</u>																					
①	②	③	④	⑤	⑥	⑦																					
①		②			④																						
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SHAPE AND DIMENSIONS

A 3D perspective view of a rectangular inductor component. The dimensions are labeled: L for length, W for width, T for thickness, and a for the fillet radius at the corners.

Unit: mm [inch]				
Type	L	W	T	a
1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.5±0.1 [.020±.004]	0.3±0.2 [.012±.008]
			0.8±0.15 [.031±.006]	
2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±.008]	0.5±0.1 [.020±.004]	0.5±0.3 [.020±.012]
			0.9±0.1 [.035±.004]	
			1.25±0.2 [.049±.008]	
2016 [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]
2520 [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]
			1.1±0.1 [.043±.004]	

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SPECIFICATIONS

MPL1608 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Ir*	T
MPL1608SR47□DT	0.47	5	105	0.19±25%	900	0.5±0.1 [.020±.004]
MPL1608LR47□HT	0.47	5	105	0.12±25%	1200	0.8±0.15 [.031±.006]
MPL1608SR47□HT	0.47	5	105	0.25±25%	800	
MPL1608SR68□HT	0.68	5	90	0.16±25%	1000	
MPL1608S1R0□HT	1.0	1	75	0.20±25%	950	
MPL1608S1R5□HT	1.5	1	50	0.25±25%	800	
MPL1608S2R2□HT	2.2	1	40	0.30±25%	750	

MPL2012 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Ir*	T
MPL2012SR47□DT	0.47	1	100	0.12±25%	1100	0.5±0.1 [.020±.004]
MPL2012S1R0□DT	1.0	1	60	0.19±25%	800	
MPL2012S1R5□DT	1.5	1	50	0.26±25%	700	
MPL2012S2R2□DT	2.2	1	40	0.34±25%	600	
MPL2012SR47□HT	0.47	1	100	0.09±25%	1200	0.9±0.1 [.035±.004]
MPL2012S1R0□HT	1.0	1	60	0.11±25%	1000	
MPL2012S1R5□HT	1.5	1	50	0.16±25%	900	
MPL2012S2R2□HT	2.2	1	40	0.25±25%	800	
MPL2012S3R3□HT	3.3	1	30	0.19±25%	900	
MPL2012S4R7□HT	4.7	1	30	0.25±25%	800	
MPL2012C2R2□HT	2.2	1	40	0.45±25%	500	
MPL2012S2R2□YT	2.2	1	40	0.33±30%	640	
MPL2012S4R7□YT	4.7	1	25	0.50±30%	600	1.25±0.2 [.049±.008]

MPL2016 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Ir*	T
MPL2016SR47□HT	0.47	1	100	0.06±25%	1600	0.9±0.1 [.035±.004]
MPL2016S1R0□HT	1.0	1	70	0.09±25%	1400	
MPL2016S1R5□HT	1.5	1	60	0.11±25%	1200	
MPL2016S2R2□HT	2.2	1	50	0.11±25%	1200	
MPL2016S3R3□HT	3.3	1	40	0.12±25%	1200	
MPL2016S4R7□HT	4.7	1	30	0.14±25%	1100	

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SPECIFICATIONS

MPL2520 TYPE

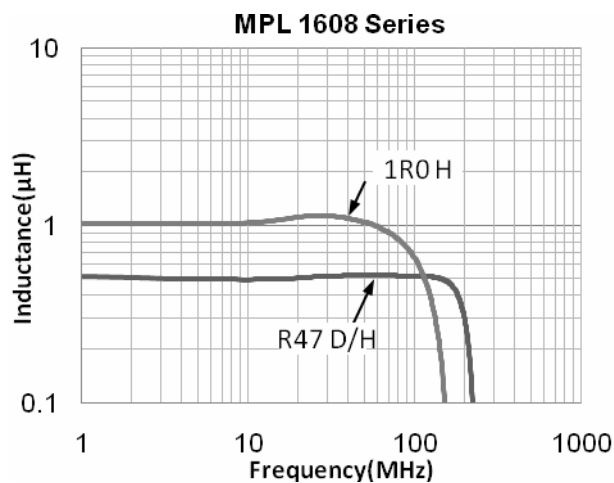
Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	I_r^*	T
MPL2520SR47□HT	0.47	1	100	$0.04\pm25\%$	1800	0.9±0.1 [.035±.004]
MPL2520S1R0□HT	1.0	1	60	$0.06\pm25\%$	1600	
MPL2520S1R5□HT	1.5	1	50	$0.07\pm25\%$	1500	
MPL2520S2R2□HT	2.2	1	40	$0.08\pm25\%$	1300	
MPL2520S3R3□HT	3.3	1	30	$0.10\pm25\%$	1200	
MPL2520S4R7□HT	4.7	1	25	$0.11\pm25\%$	1100	1.1±0.1 [.043±.004]
MPL2520S1R0□WT	1.0	1	70	$0.09\pm25\%$	1500	
MPL2520S2R2□WT	2.2	1	40	$0.12\pm25\%$	1000	
MPL2520S3R3□WT	3.3	1	30	$0.12\pm25\%$	1000	
MPL2520S4R7□WT	4.7	1	25	$0.14\pm25\%$	900	
MPL2520S100□WT	10	1	15	$0.30\pm30\%$	800	

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

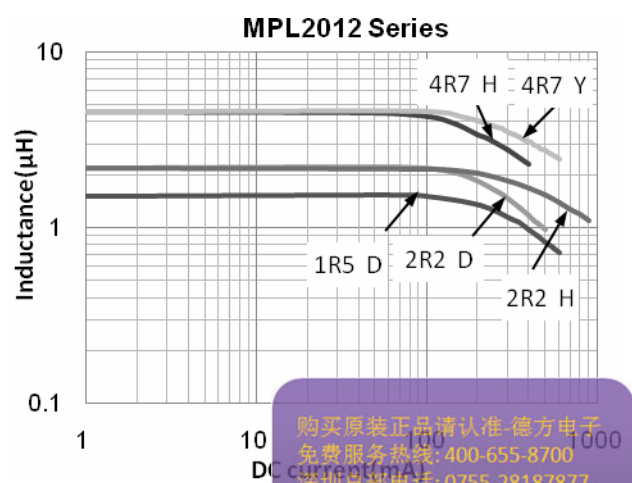
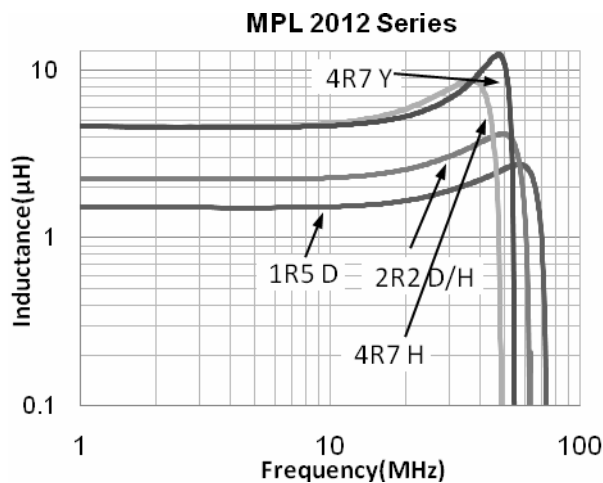
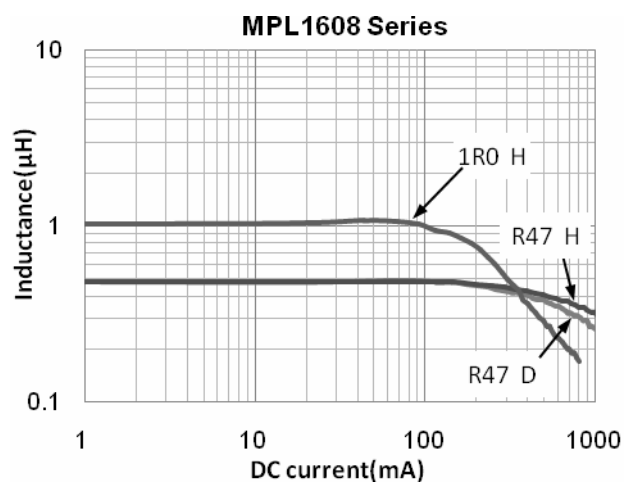
※ I_r^* : DC current causes temperature rise of 40°C from 20°C ambient

TYPICAL ELECTRICAL CHARACTERISTICS

Inductance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics



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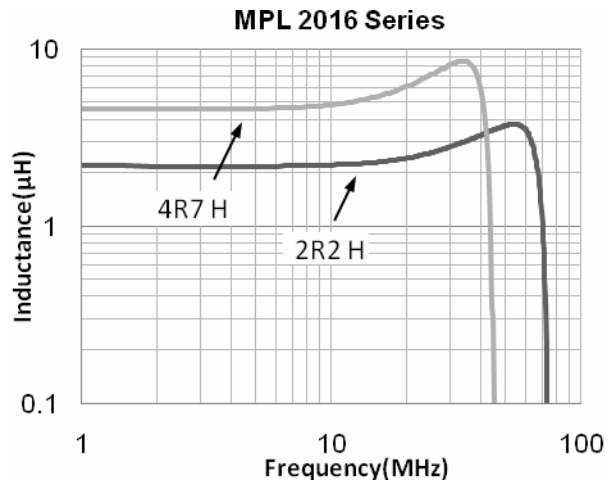
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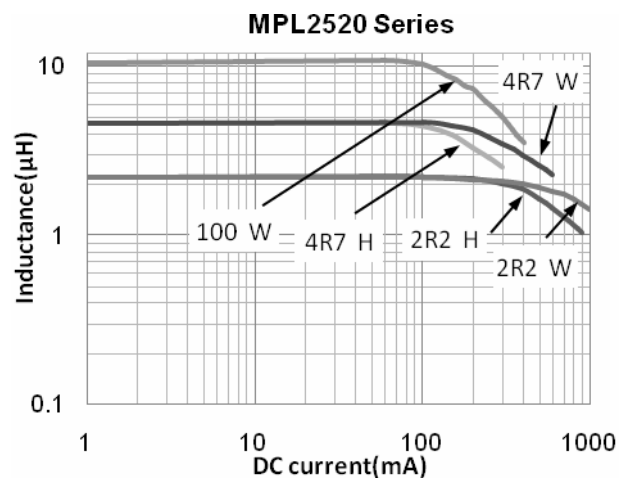
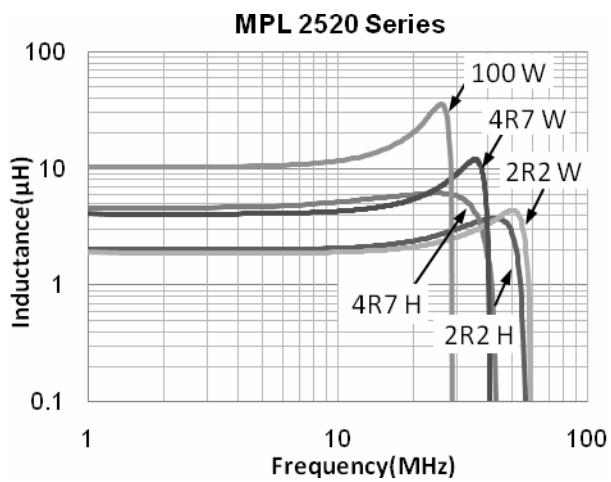
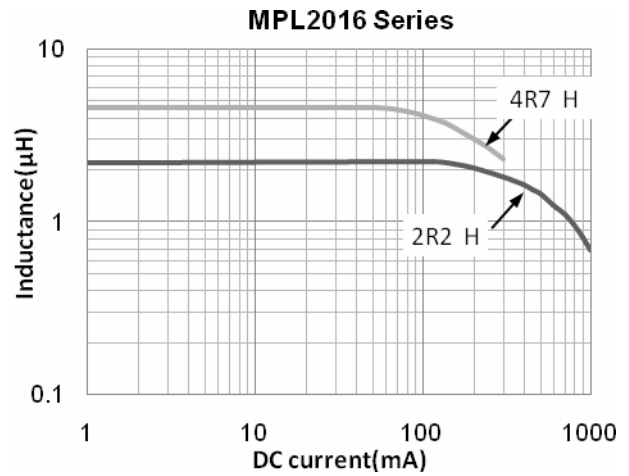
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