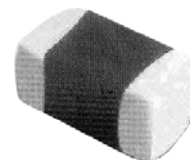


Multilayer Chip Power Inductor – MPL Series

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																						
<table><tr><th colspan="2">Type</th></tr><tr><td>MPL</td><td>Chip Power Inductor</td></tr></table>		Type		MPL	Chip Power Inductor	<table><tr><th colspan="2">External Dimensions (L×W) (mm)</th></tr><tr><td>1608 [0603]</td><td>1.6×0.8</td></tr><tr><td>2012 [0805]</td><td>2.0×1.25</td></tr><tr><td>2016 [0806]</td><td>2.0×1.6</td></tr><tr><td>2520 [1008]</td><td>2.5×2.0</td></tr></table>		External Dimensions (L×W) (mm)		1608 [0603]	1.6×0.8	2012 [0805]	2.0×1.25	2016 [0806]	2.0×1.6	2520 [1008]	2.5×2.0	<table><tr><th colspan="2">Nominal Inductance</th></tr><tr><td>Example</td><td>Nominal Value</td></tr><tr><td>R47</td><td>0.47μH</td></tr><tr><td>4R7</td><td>4.7μH</td></tr></table>		Nominal Inductance		Example	Nominal Value	R47	0.47μH	4R7	4.7μH
Type																											
MPL	Chip Power Inductor																										
External Dimensions (L×W) (mm)																											
1608 [0603]	1.6×0.8																										
2012 [0805]	2.0×1.25																										
2016 [0806]	2.0×1.6																										
2520 [1008]	2.5×2.0																										
Nominal Inductance																											
Example	Nominal Value																										
R47	0.47μH																										
4R7	4.7μH																										
③																											
<table><tr><th colspan="2">Feature Type</th></tr><tr><td>S</td><td rowspan="3">(Internal Code)</td></tr><tr><td>L</td></tr><tr><td>C</td></tr></table>		Feature Type		S	(Internal Code)	L	C																				
Feature Type																											
S	(Internal Code)																										
L																											
C																											
⑦		⑤			⑥																						
<table><tr><th colspan="2">Packing</th></tr><tr><td>T</td><td>Tape & Reel</td></tr></table>		Packing		T	Tape & Reel	<table><tr><th colspan="2">Inductance Tolerance</th></tr><tr><td>M</td><td>±20%</td></tr><tr><td>N</td><td>±30%</td></tr></table>		Inductance Tolerance		M	±20%	N	±30%	<table><tr><th colspan="2">Thickness</th></tr><tr><td>D</td><td>0.5mm</td></tr><tr><td>H</td><td>0.9mm</td></tr><tr><td>W</td><td>1.1mm</td></tr><tr><td>Y</td><td>1.25mm</td></tr></table>		Thickness		D	0.5mm	H	0.9mm	W	1.1mm	Y	1.25mm		
Packing																											
T	Tape & Reel																										
Inductance Tolerance																											
M	±20%																										
N	±30%																										
Thickness																											
D	0.5mm																										
H	0.9mm																										
W	1.1mm																										
Y	1.25mm																										

SHAPE AND DIMENSIONS

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] 0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±.008]	0.5±0.1 [.020±.004] 0.9±0.1 [.035±.004] 1.25±0.2 [.049±.008]	0.5±0.3 [.020±.012]
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] 1.1±0.1 [.043±.004]	0.5±0.3 [.020±.012]

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	

SPECIFICATIONS

MPL2520 TYPE

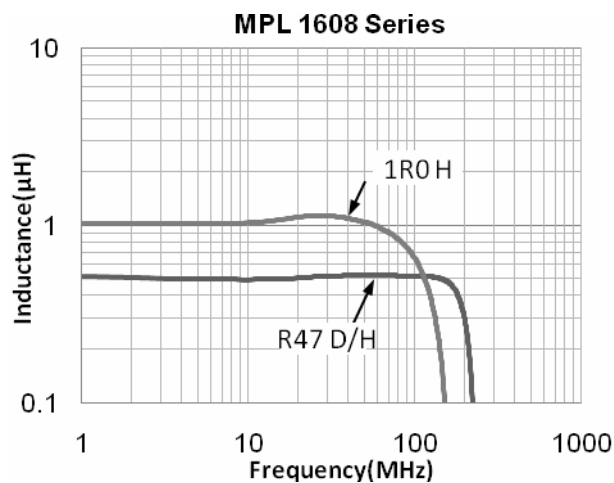
Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	I_r^*	T
MPL2520SR47□HT	0.47	1	100	$0.04\pm25\%$	1800	0.9 ± 0.1 [.035 $\pm$.004]
MPL2520S1R0□HT	1.0	1	60	$0.06\pm25\%$	1600	
MPL2520S1R5□HT	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	
MPL2520S1R0□WT	1.0	1	70	$0.09\pm25\%$	1500	1.1 ± 0.1 [.043 $\pm$.004]
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= $\pm 20\%$, N= $\pm 30\%$).

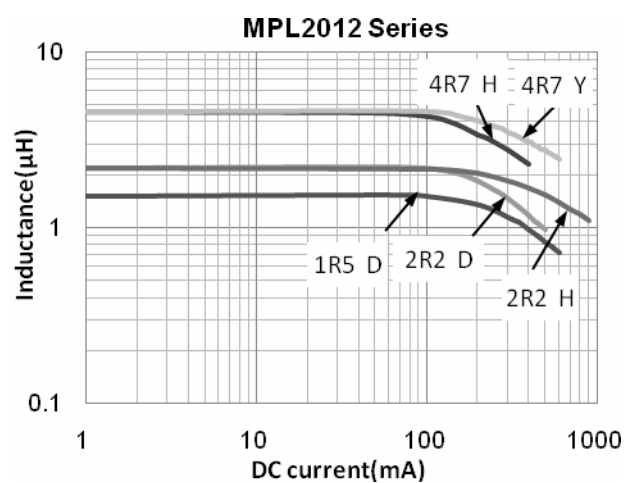
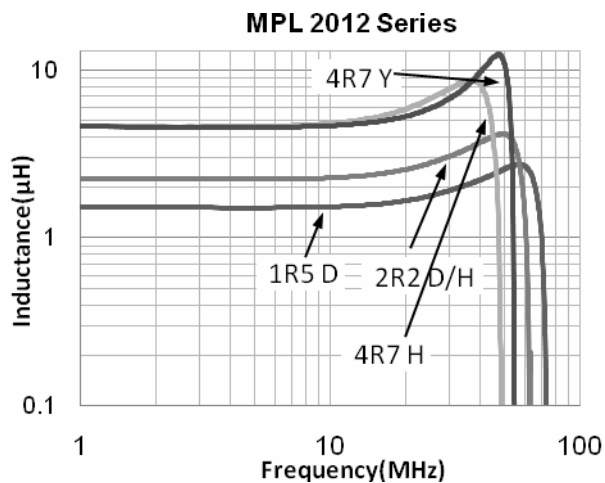
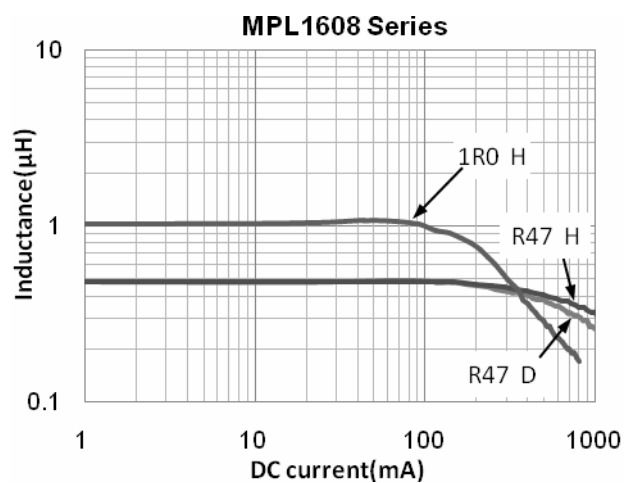
※ I_r^* : DC current causes temperature rise of 40°C from 20°C ambient

TYPICAL ELECTRICAL CHARACTERISTICS

Inductance vs. Frequency Characteristics

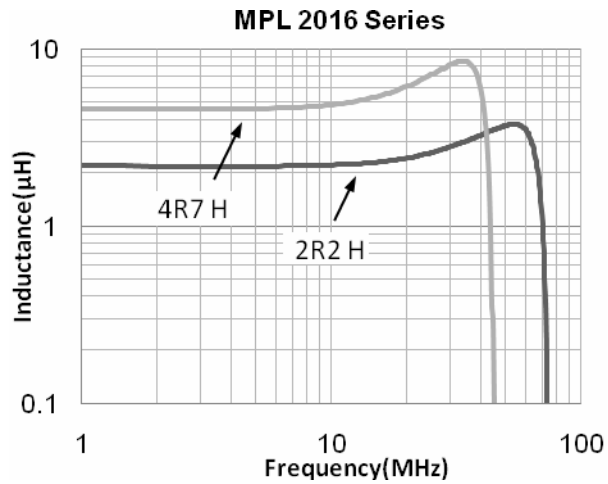


Inductance vs. DC Current Characteristics

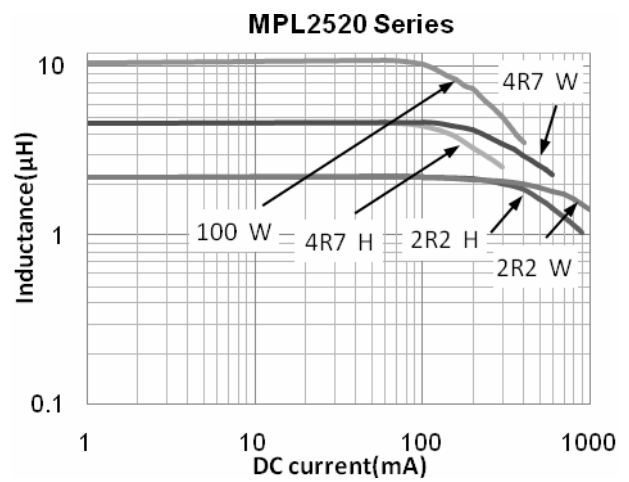
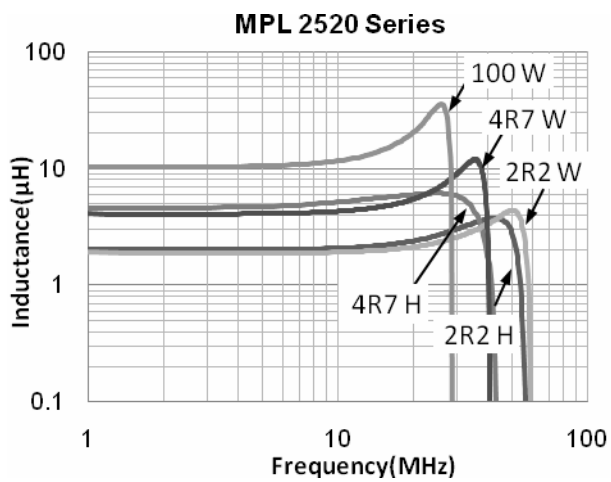
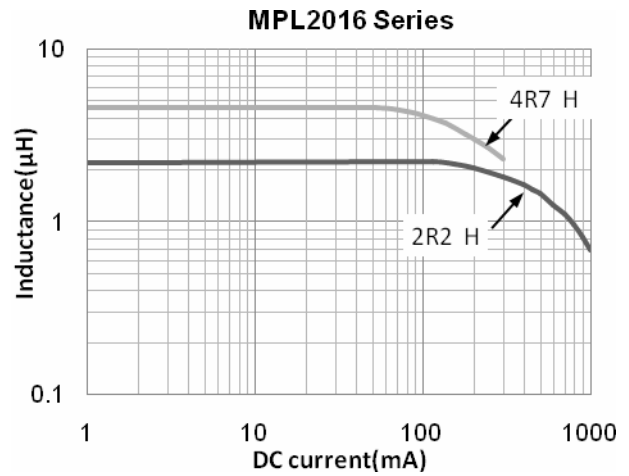


TYPICAL ELECTRICAL CHARACTERISTICS

Inductance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Fixed Inductors](#) category:

Click to view products by [Sunlord](#) manufacturer:

Other Similar products are found below :

[CR32NP-151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#) [CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#) [70F224AI](#) [MGDQ4-00004-P](#) [MHL1ECTTP18NJ](#) [MHQ1005P10NJ](#) [MHQ1005P1N0S](#) [MHQ1005P2N4S](#) [MHQ1005P3N6S](#) [MHQ1005P5N1S](#) [MHQ1005P8N2J](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53602NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [9220-20](#) [9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#) [1206CS-471XJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HCF1305-3R3-R](#) [1206CS-151XG](#) [RCH664NP-140L](#) [RCH664NP-4R7M](#) [RCH8011NP-221L](#) [RCP1317NP-332L](#) [RCP1317NP-391L](#) [RCR1010NP-470M](#)