

MPL Semi-Shielded Power Inductors



MPS Power Inductor Family

	MPL-SE2512	MPL-SE4030	MPL-SE5040	MPL-SE6040
Base (mm)	2.0 x 2.5	4.0 x 4.0	4.90 x 4.90	6.0 x 6.0
Height (mm)	1.20	3.0	4.0	4.0
	R_{DC} $I_{R@40K}$ $I_{sat@30\%}$ (mΩ) (A) (A)	R_{DC} $I_{R@40K}$ $I_{sat@30\%}$ (mΩ) (A) (A)	R_{DC} $I_{R@40K}$ $I_{sat@30\%}$ (mΩ) (A) (A)	R_{DC} $I_{R@40K}$ $I_{sat@30\%}$ (mΩ) (A) (A)
0.47μH	27 4.5 6.5		7.3 8.0 16	
0.68μH	33 3.8 4.3			
1.0μH	45 3.35 4.2	12.5 6.3 7.5	9.4 7.6 10.5	
1.5μH	62 2.9 3.2		14 6.2 9.3	11.5 6.8 8.9
2.2μH	92 2.5 2.7	30 3.9 5.5	16 5.4 7.9	14.5 6.3 7.2
3.3μH	158 1.8 2.4	39.8 3.45 4.1	22 5.2 6.4	19.5 5.6 5.6
4.7μH	205 1.6 1.9	63 2.6 3.7	33 4.3 5.0	23 5.2 5.0
6.8μH		83 2.4 3.3	45 3.5 4.6	33 4.4 4.1
8.2μH				39 4.0 3.6
10μH	400 1.1 1.3	97 2.2 2.4	56 3.2 3.6	41 3.8 3.4
15μH	620 0.85 0.9	185 1.6 1.95	83 2.5 2.9	70 2.8 2.7
22μH	1000 0.70 0.8	219 1.5 1.65	124 2.1 2.4	97 2.35 2.25

The new surface-mounted power inductors from Monolithic Power Systems are designed for applications ranging from power supply to power converters. The molded and semi-shielded series inductors comprise inductance ranges from 0.33 μH to 22 μH and saturation current ranges from 0.8 A to 64 A.

Semi-Shielded Series (MPL-SE)

The MPL-SE semi-shielded power inductors are shielded by an external magnetic epoxy resin for better magnetic characteristics. Their design offers a lower DCR and higher current capabilities.



Molded Series (MPL-AT / AY / AL)

This series includes molded magnetic-shielded power inductors that offer soft saturation due to their molded design, delivering a stable high-temperature behavior.



Their molded construction decreases the audible noise generated from alternating currents and pulse wave frequencies.



The MPL-AT Series offers a very low profile where height is a design restriction. This series also offers Low DCR/ACR and the ability to handle high current.

The MPL-AY Series offers Low DCR/ACR and the ability to handle high current.



The MPL-AL Series offers Low DCR/ACR and a flat-wire construction, which provides even higher current ratings than round-wire molded inductors.

Power Inductor Sample Kits



Available in Five Configurations

Part Number	L-Values	Inductor Series / Sizes
EVSK005V1	25	MPL-SE / 2512 4030 5040 6040
EVSK004V1	25	MPL-AL / 4020 5030 5050 6050 6060
EVSK003V1	20	MPL-AY / 1050 1265
EVSK002V1	16	MPL-AY / 3020 4020
EVSK001V1	16	MPL-AT / 2010 2012 2014

Please contact MPS Sales in your area for pricing and additional information.

For more information visit MonolithicPower.com or email: PowerMagnetics@monolithicpower.com



MPL Molded Power Inductors



	MPL-AT2010	MPL-AT2512	MPL-AT2514	MPL-AL4020	MPL-AL5030	MPL-AL5050	MPL-AL6050	MPL-AL6060	MPL-AY3020	MPL-AY4020	MPL-AY1050	MPL-AY1265																											
Base (mm)	2.0 x 1.6			4.10 x 4.10			6.60 x 6.40			3.50 x 3.20			13.50 x 12.60			Base (mm)																							
Height (mm)	1.0			1.90			4.80			1.80			6.20			Height (mm)																							
	R_{DC} (mΩ)	$I_{R@40K}$ (A)	$I_{sat@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40K}$ (A)	$I_{sat@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40K}$ (A)	$I_{sat@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40K}$ (A)	$I_{sat@30\%}$ (A)	R_{DC} (mΩ)	$I_{R@40K}$ (A)	$I_{sat@30\%}$ (A)																								
0.33μH				13.5	6.4	8.5										0.33μH																							
0.47μH	27	4.4	5.7	19	5.5	6.4	6.2	9.2	12.5	3.78	13.6	26.5	19.5	6.3	9.0	1.25	25	41	0.89	33	64	0.47μH																	
0.56μH							3.92	13.2	22										1.1	31	58	0.56μH																	
0.68μH	41	3.5	4.9	26	4.7	6.0	7.5	8.7	11				26	5.15	8.6	1.75	23	36	1.25	29	51	0.68μH																	
0.82μH							9.0	8.4	9.5	5.0	12.8	18	3.9	16.9	24				1.3	27	46	0.82μH																	
1.0μH	50	3.2	4.2	35	4.0	5.2	10.1	7.9	8.6	6.5	11.2	16	4.3	16.2	21				2.6	19	33	1.5	25.5	43	1.0μH														
1.2μH							12.2	7.4	7.5	8.0	10.0	14	5.3	14.6	20				1.8	24	37	1.2μH																	
1.5μH	97	2.4	3.2	56	3.2	4.2	14.5	6.4	7.1	9.7	9.0	12.5	6.0	13.3	18				3.4	17	26.5	2.3	22	34	1.5μH														
1.8μH							10.5	8.8	12										3.3	20	29	1.8μH																	
2.2μH	137	2.2	2.7		70	2.6	3.4	21.5	5.5	6.2	12.3	8.2	11	8.3	12	15			64	3.0	5.3	4.9	15	19.5	3.7	17	26.5	2.2μH											
3.3μH							34.5	4.4	5.2	21	6.0	10	11.7	10.1	12				121	2.5	3.7	8.0	12.5	17	5.5	16	25	3.3μH											
4.7μH	215	1.5	1.9		180	1.7	2.4	52.2	3.65	4.2	33	5.3	8.0	16.5	7.5	11	12	10	9.0	173	2.0	3.1	9.5	11.5	15	7.0	14	23	4.7μH										
5.6μH										20	6.8	8.0	19	7.0	10	13	9.4	8.6	209	1.8	2.8	97	2.45	2.6	13	9.8	14	8.6	13	20	5.6μH								
6.8μH																			25	6.1	7.6	16	8.5	8.0	250	1.65	2.6	129	2.20	2.4	15	9.0	13	9.9	12	19.5	6.8μH		
8.2μH																			28	5.8	7.2	19	8.0	7.0	345	1.4	1.95	136	2.10	2.1				12.5	11.5	18	8.2μH		
10μH																			37	4.8	5.5	24	6.9	6.6	370	1.3	1.75	163	1.90	2.0	19	7.8	12	13.3	10.7	16	10μH		
15μH																																			21.8	8.5	12	15μH	
22μH																																				31.4	7.0	9.0	22μH