

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)	2x1.6			2.5x2			2.5x2			4.1x4.1			5.5x5.3			5.5x5.3			6.6x6.4			6.6x6.4			3.5x3.2			4.45x4.1			11x10			13.5x12.6								
Height (mm)	1			1.2			1.4			1.9			2.9			4.8			4.8			5.8			1.8			1.8			4.8			6.2								
	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)	R_{DC} (mΩ)	I_{RIG40k} (A)	$I_{SAT@30\%}$ (A)									
0.33μH				13.5	6.4	8.5																																				
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				1.25	25	41	0.89	33	64									
0.56μH													3.92	13.2	22																			1.1	31	58						
0.68μH	41	3.5	4.9	26	4.7	6				7.5	8.7	11										26	5.15	8.6				1.75	23	36	1.25	29	51									
0.82μH										9	8.4	9.5	5	12.8	18				3.9	16.9	24				28	4.7	8				1.3	27	46									
1.0μH	50	3.2	4.2	35	4	5.2				10.1	7.9	8.6	6.5	11.2	16				4.3	16.2	21				30	4.3	6.2				2.6	19	33	1.5	25.5	43						
1.2μH										12.2	7.4	7.5	8	10	14				5.3	14.6	20										1.8	24	37									
1.5μH	97	2.4	3.2	56	3.2	4.2				14.5	6.4	7.1	9.7	9	12.5				6	13.3	18				35	3.4	5.9				3.4	17	26.5	2.3	22	34						
1.8μH													10.5	8.8	12																			3.3	20	29						
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	5.3				4.9	15	19.5	3.7	17	26.5						
3.3μH				121	2	2.7				34.5	4.4	5.2	21	6	10				11.7	10.1	12				121	2.5	3.7				8	12.5	17	5.5	16	25						
4.7μH	215	1.5	1.9				180	1.7	2.4	52.2	3.65	4.2	33	5.3	8				16.5	7.5	11	12	10	9	173	2	3.1				9.5	11.5	15	7	14	23						
5.6μH																20	6.8	8	19	7	10	13	9.4	8.6	209	1.8	2.8	97	2.45	2.6	13	9.8	14	8.6	13	20						
6.8μH				280	1.4	2.2													25	6.1	7.6				16	8.5	8	250	1.65	2.6	129	2.2	2.4	15	9	13	9.9	12	19.5			
8.2μH																			28	5.8	7.2				19	8	7	345	1.4	1.95	136	2.1	2.1				12.5	11.5	18			
10μH				355	1.2	1.7										37	4.8	5.5							24	6.9	6.6	370	1.3	1.75	163	1.9	2	19	7.8	12	13.3	10.7	16			
15μH																									35	5.8	5.5										21.8	8.5	12			
22μH																																					31.4	7	9			

Easy Product Selection **MPL-XX XXXX-XXX**

XX MPS Inductor Series
(AT / AL / AY / SE)

XXXX Size Code
(2010 / 2512 / 3020 / ...)

XXX Inductance Code
(R47 = 0.47μH / 4R7 = 4.7μH / 470 = 47μH ...)



MPL Semi-Shielded Power Inductors

	MPL-SE2512			MPL-SE4030			MPL-SE5040			MPL-SE6040		
Base (mm)	2.5x2			4x4			4.9x4.9			6x6		
Height (mm)	1.2			3			4			4		
	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)	R _{DC} (mΩ)	I _{RIG40k} (A)	I _{SAT@30%} (A)
0.47μH	20	4.5	6.5				7.3	8	16			
0.68μH	28	3.9	5	10	6	7.5						
1.0μH	35	3.4	4.2	14	5.5	7	9.4	7.6	10.5			
1.5μH	50	2.9	3.2				14	6.2	9.3	11.5	6.8	8.9
2.2μH	72	2.5	2.7	30	3.7	5.5	16	5.4	7.9	14.5	6.3	7.2
3.3μH	90	2.1	2.4	40	3.3	4.1	22	5.2	6.4	19.5	5.6	5.6
4.7μH	165	1.6	1.9	62	2.6	3.4	33	4.3	5	23	5.2	5
6.8μH	305	1.2	1.6	90	2.2	2.9	45	3.5	4.6	33	4.4	4.1
8.2μH										39	4	3.6
10μH	410	1.1	1.3	100	2	2.2	56	3.2	3.6	41	3.8	3.4
15μH	620	0.85	0.9	185	1.4	1.8	83	2.5	2.9	70	2.8	2.7
22μH	885	0.7	0.8	220	1.3	1.5	124	2.1	2.4	97	2.35	2.25
33μH				330	1.1	1.2						
47μH				480	0.9	1						

Power Inductor Sample Kits

Part Number	L-Values	Inductor Series / Sizes
EVSK-001	12	MPL-AT / 2010 2512 2514
EVSK-002	16	MPL-AY / 3020 4020
EVSK-003	18	MPL-AY / 1050 1265
EVSK-004	24	MPL-AL / 4020 5030 5050 6050 6060
EVSK-005	24	MPL-SE / 4030 5040 6040
EVSK-006	11	MPL-SE / 2512

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

Easy Product Selection MPL-XX XXXX-XXX

XX MPS Inductor Series (AT / AL / AY / SE) **XXXX** Size Code (2010 / 2512 / 3020 / ...)

XXX Inductance Code (R47 = 0.47μH / 4R7 = 4.7μH / 470 = 47μH ...)



MPS Power Inductor Family

Optimized Performance with MPS ICs

The new surface-mounted power inductors from Monolithic Power Systems are designed for applications ranging from power supplies to power converters. The molded and semi-shielded series inductors comprise inductance ranges from 0.33μH to 47μH, and saturation current ranges from 0.8A to 64A.

- ✓ Designed for optimal performance with MPS ICs to provide an easy, complete power solution
- ✓ Highly efficient molded and semi-shielded options, with operating temperatures up to 155°C
- ✓ Include a wide range of specifications and sizes that cover use cases across our entire portfolio of ICs

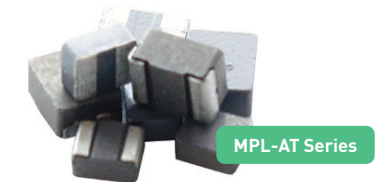
Semi-Shielded Series (MPL-SE)

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 currents.

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.

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

