



## HPI2016/2520 P SERIES

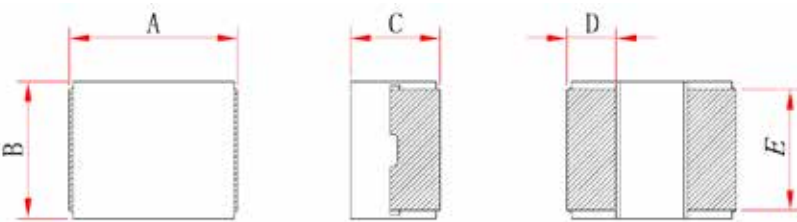
HIGH POWER INDUCTOR

### Applications:

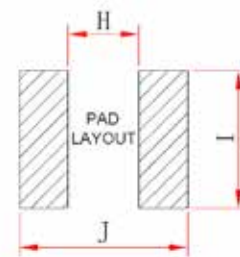
- DC/DC converter for CPU in Notebook PC
- Cellular phones, LCD displays, HDDs, DVCs, PDAs etc..
- Thin type on-board power supply module for exchanger
- VRM for server



### Shape and Dimensions



### Recommend Land Pattern Dimensions



Item	A	B	C	D	E	H	I	J
HPI201610P	2.0±0.2	1.6±0.2	1.0 Max	0.5±0.2	1.44	0.9	1.6	2.3
HPI201612P	2.0±0.2	1.6±0.2	1.2 Max	0.5±0.2	1.44	0.9	1.6	2.3
HPI252010P	2.5±0.2	2.0±0.2	1.0 Max	0.6±0.2	1.84	1.2	2.0	2.8
HPI252012P	2.5±0.2	2.0±0.2	1.2 Max	0.6±0.2	1.84	1.2	2.0	2.8

### Features :

- High performance (I sat) realized by metal dust core.
- Low profile: 2.0mm x 1.6mm x 1.0mm  
2.0mm x 1.6mm x 1.2mm  
2.5mm x 2.0mm x 1.0mm  
2.5mm x 2.0mm x 1.2mm
- Low loss realized with low DCR
- Magnetically Shielded.
- RoHS compliant.

### Characteristics:

- Saturation Current (I<sub>sat</sub>) : The current will cause L<sub>0</sub> to drop approximately 30% typical
- Temperature Rise Current ( I<sub>rms</sub>) : The current will cause the coil temperature rise approximately Δ T=40°C.
- Operating Temperature : -55°C to 125°C

### Product Identification:

**HPI 201610 P - 1R0 M**

(1) (2) (3) (4) (5)

- (1) Series :High Power Inductors.
- (2) Dimensions :**201610** is size.
- (3) Special code: Extra low DCR
- (4) Inductance: **1R0** for 1.0uH.
- (5) Inductance tolerance: **M**: ± 20%

### Handling and precautions:

- Please contact us before cleaning this product.

### Test equipments :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Milli-ohm meter


**● HPI2016/2520 P series**

Part No.	Inductance L (uH)	Tolerance (±%)	DCR (mΩ)		I sat (A)		I rms (A)	
			Typ	Max	Typ	Max	Typ	Max
HPI201610P-R24M	0.24	20	17.0	20.5	6.0	5.4	4.7	4.2
HPI201610P-R33M	0.33	20	25.0	30.0	5.2	4.7	4.1	3.6
HPI201610P-R47M	0.47	20	32.0	38.0	5.0	4.4	3.8	3.3
HPI201610P-R68M	0.68	20	42.0	48.0	4.0	3.6	3.2	2.7
HPI201610P-1R0M	1.0	20	60.0	68.0	2.9	2.4	2.6	2.3
HPI201610P-1R5M	1.5	20	100	116	2.4	1.8	2.1	1.8
HPI201610P-2R2M	2.2	20	147	163	1.9	1.6	1.8	1.6
HPI201612P-R24M	0.24	20	15.0	19.0	6.5	5.6	5.2	4.4
HPI201612P-R33M	0.33	20	22.0	26.0	5.4	4.6	4.6	3.9
HPI201612P-R47M	0.47	20	25.0	30.0	4.5	3.8	4.0	3.4
HPI201612P-R68M	0.68	20	36.0	44.0	3.8	3.2	3.5	3.0
HPI201612P-1R0M	1.0	20	50.0	60.0	2.9	2.5	3.0	2.5
HPI201612P-1R5M	1.5	20	86.0	104	2.3	2.0	2.2	2.0
HPI201612P-2R2M	2.2	20	120	144	2.0	1.65	1.8	1.6
HPI252010P-R22M	0.22	20	15.0	17.0	8.5	7.0	6.5	5.5
HPI252010P-R33M	0.33	20	16.5	20.0	6.5	5.8	5.5	4.8
HPI252010P-R47M	0.47	20	23.0	29.0	5.5	5.0	4.1	3.6
HPI252010P-R68M	0.68	20	36.0	44.0	4.6	4.1	3.6	3.1
HPI252010P-1R0M	1.0	20	44.0	53.0	4.0	3.6	3.4	3.0
HPI252010P-1R5M	1.5	20	61.0	70.0	3.0	2.5	2.8	2.4
HPI252010P-2R2M	2.2	20	90.0	105	2.6	2.2	2.0	1.8
HPI252012P-R22M	0.22	20	11.0	13.0	8.5	7.0	10.0	8.0
HPI252012P-R33M	0.33	20	15.0	16.5	7.0	5.8	5.8	5.2
HPI252012P-R47M	0.47	20	20.0	25.0	6.0	5.0	4.8	4.2
HPI252012P-R68M	0.68	20	30.0	34.0	4.6	4.0	3.9	3.5
HPI252012P-1R0M	1.0	20	38.0	45.0	4.3	3.9	3.7	3.2
HPI252012P-1R5M	1.5	20	53.0	60.0	3.0	2.6	2.9	2.6
HPI252012P-2R2M	2.2	20	78.0	90.0	2.7	2.3	2.4	2.0

**If you require another part number please contact with us.**

Note 1: Referenced ambient temperature 20°C.

Note 2: Test Condition :1MHz ,1.0 Vrms.

Note 3: I sat (Typ) : DC current (A) that will cause L0 to drop approximately 30%

I sat (Max) : DC current (A) that will cause L0 to drop 30% Max

I rms (Typ) : DC current (A) that will cause an approximate ΔT of 40°C

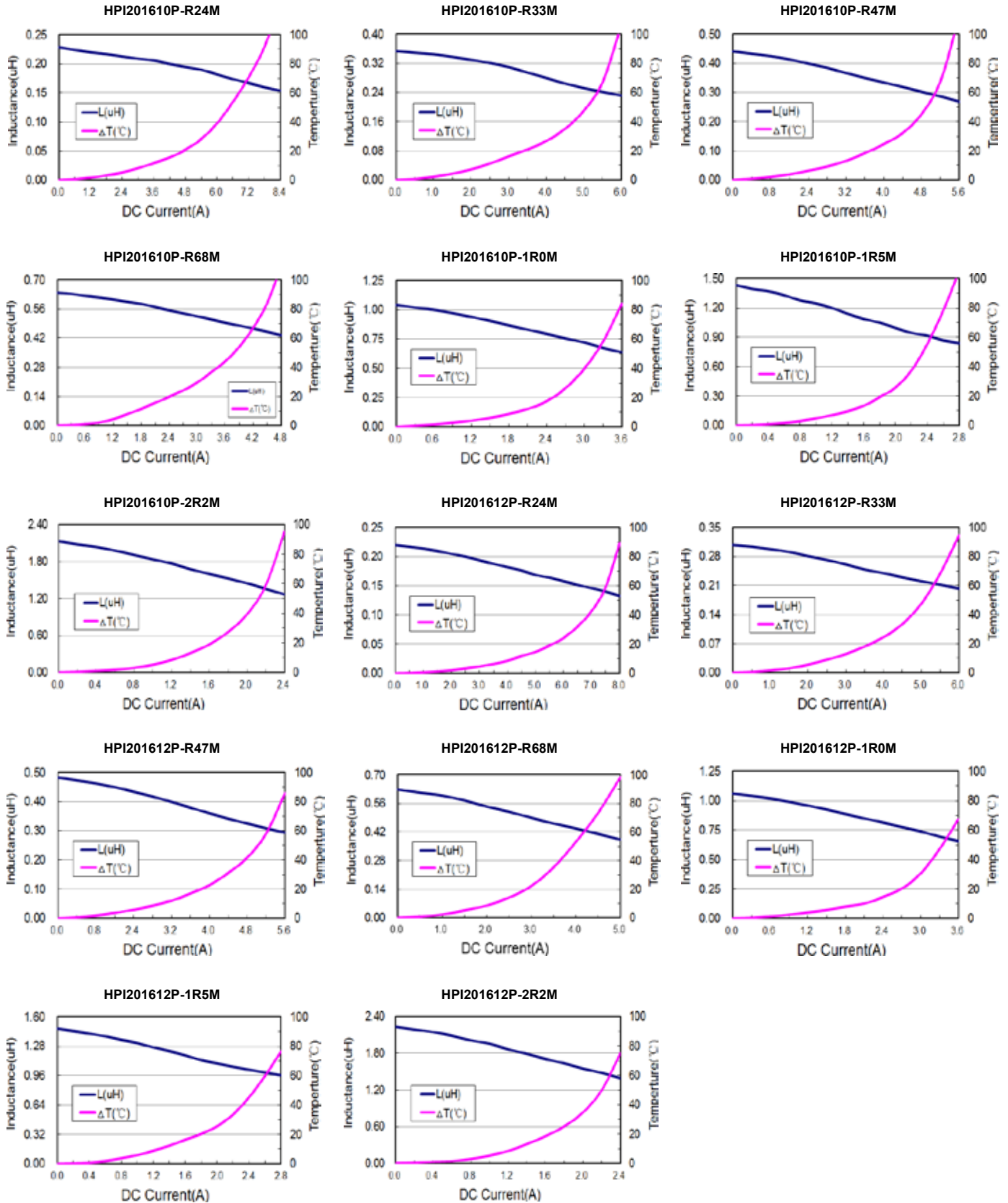
I rms (Max): DC current (A) that will cause an ΔT of 40°C Max

Note 4: Operating temperature range includes self-temperature rise.

Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.



Typical performance curves :

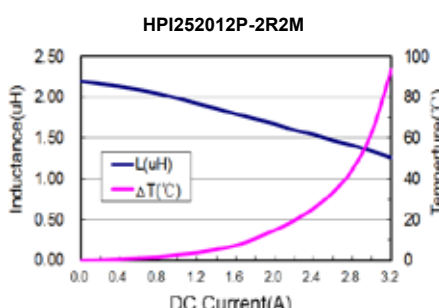
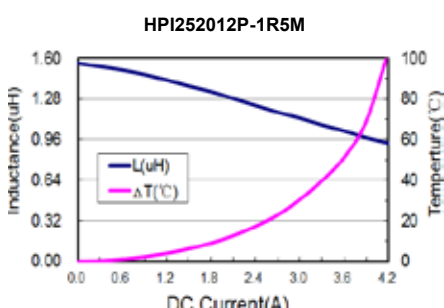
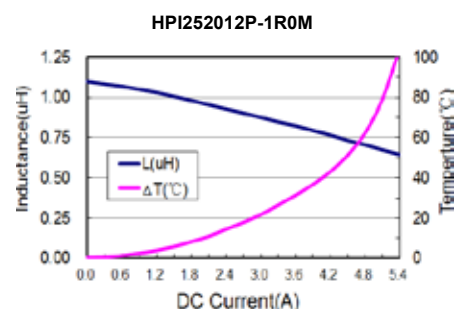
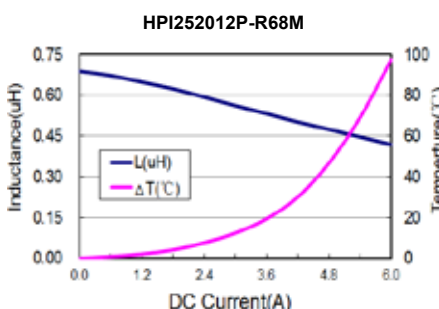
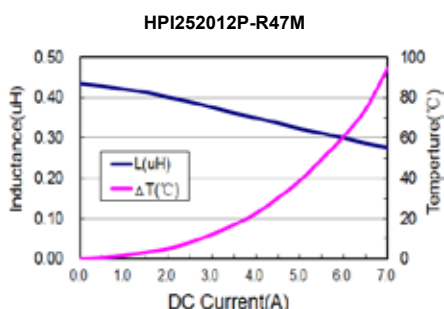
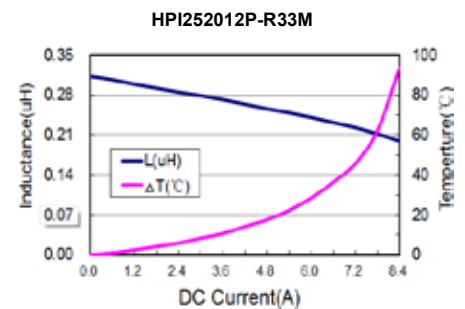
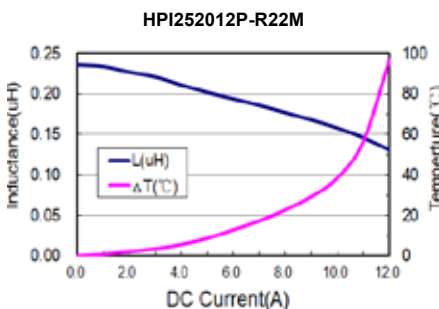
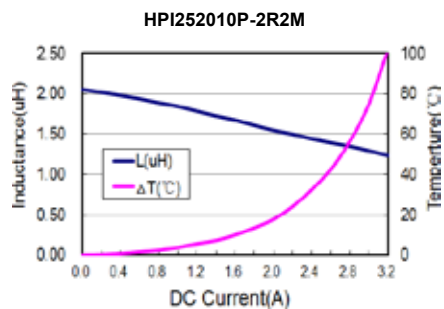
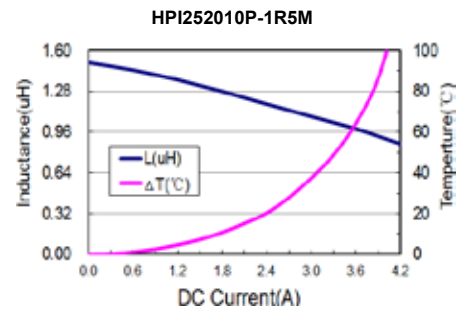
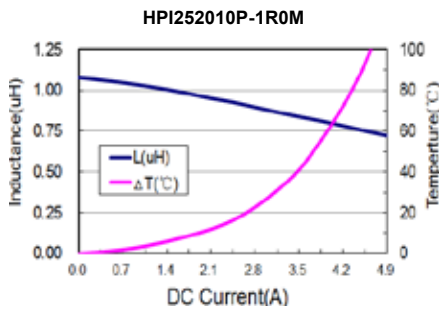
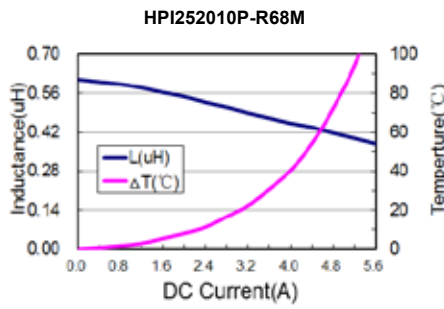
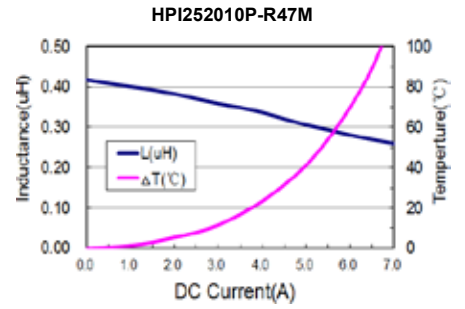
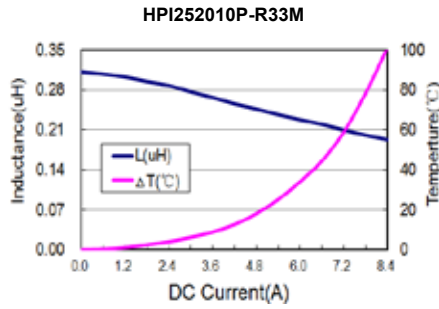
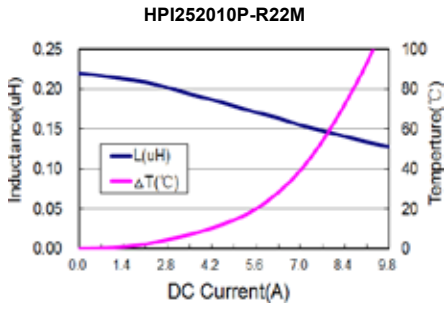


\* Due to the limited space, the catalogue shows the typical specifications only. For more specific details ( characteristics graph, reliability, and others), kindly invite you to access 3L official website [www.3lcoil.com](http://www.3lcoil.com) for better known.



Typical performance curves :

Power Inductor-SMT Type



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