



## HPI 2016/2520 SERIES

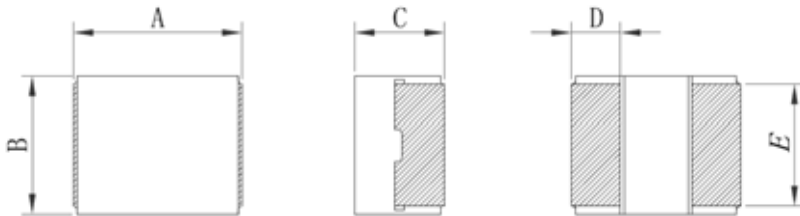
HIGH POWER INDUCTOR

### Applications:

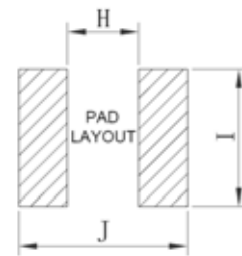
- DC/DC converter for CPU in Notebook PC
- Cellular phones, LCD displays, HDDs, DVCs, PDAs etc..
- Thin type on-board power supply module for exchanger
- VRM for server



### Shape and Dimensions



### Recommend Land Pattern Dimensions



Item	A	B	C	D	E	H	I	J
HPI201610	2.0±0.2	1.6±0.2	1.0 Max	0.5±0.2	1.44	0.9	1.6	2.3
HPI201612	2.0±0.2	1.6±0.2	1.2 Max	0.5±0.2	1.44	0.9	1.6	2.3
HPI252010	2.5±0.2	2.0±0.2	1.0 Max	0.6±0.2	1.84	1.2	2.0	2.8
HPI252012	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 – 1R0 M**

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

- (1) Series :High Power Inductors.
- (2) Dimensions :**201610** is size.
- (3) Inductance: **1R0** for 1.0uH.
- (4) 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 series**

Part No.	Inductance L (uH)	Tolerance (±%)	DCR (mΩ)		I sat (A)		I rms (A)	
			Typ	Max	Typ	Max	Typ	Max
HPI201610-R24M	0.24	20	20.0	24.0	4.8	4.3	4.0	3.5
HPI201610-R33M	0.33	20	29.0	36.0	4.2	3.7	3.4	3.0
HPI201610-R47M	0.47	20	36.0	46.0	3.56	3.2	2.7	2.43
HPI201610-R68M	0.68	20	55.0	66.0	3.2	2.9	2.4	2.2
HPI201610-1R0M	1.0	20	63.0	78.0	2.7	2.2	2.1	1.9
HPI201610-1R5M	1.5	20	105	137	2.2	2.0	1.8	1.6
HPI201610-2R2M	2.2	20	174	197	1.9	1.6	1.6	1.4
HPI201612-R24M	0.24	20	17.0	21.0	5.3	4.8	4.5	4.0
HPI201612-R33M	0.33	20	27.0	33.0	4.6	4.0	3.9	3.5
HPI201612-R47M	0.47	20	30.0	36.0	3.9	3.5	3.5	3.1
HPI201612-R68M	0.68	20	46.0	55.0	3.5	3.0	2.8	2.6
HPI201612-1R0M	1.0	20	60.0	72.0	2.9	2.5	2.4	2.2
HPI201612-1R5M	1.5	20	86.0	112	2.4	2.2	1.9	1.7
HPI201612-2R2M	2.2	20	146	186	2.0	1.65	1.5	1.35
HPI252010-R22M	0.22	20	15.0	18.0	6.6	6.0	5.8	5.22
HPI252010-R33M	0.33	20	18.0	26.0	5.3	4.77	4.4	4.0
HPI252010-R47M	0.47	20	25.0	41.0	4.5	4.05	3.5	3.1
HPI252010-R68M	0.68	20	40.0	48.0	4.3	3.6	3.3	3.0
HPI252010-1R0M	1.0	20	49.0	65.0	3.55	3.2	2.8	2.52
HPI252010-1R5M	1.5	20	76.0	95.0	2.9	2.4	2.2	1.98
HPI252010-2R2M	2.2	20	110	121	2.4	2.1	1.8	1.62
HPI252012-R22M	0.22	20	12.0	15.0	8.5	7.0	7.3	6.2
HPI252012-R33M	0.33	20	15.0	17.0	5.8	5.22	5.5	4.95
HPI252012-R47M	0.47	20	23.0	28.0	5.0	4.5	4.5	4.0
HPI252012-R68M	0.68	20	34.0	40.0	4.3	3.7	3.8	3.3
HPI252012-1R0M	1.0	20	42.0	55.0	3.8	3.3	3.1	2.7
HPI252012-1R5M	1.5	20	61.0	70.0	2.9	2.61	2.7	2.43
HPI252012-2R2M	2.2	20	92.0	105	2.5	2.2	2.3	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

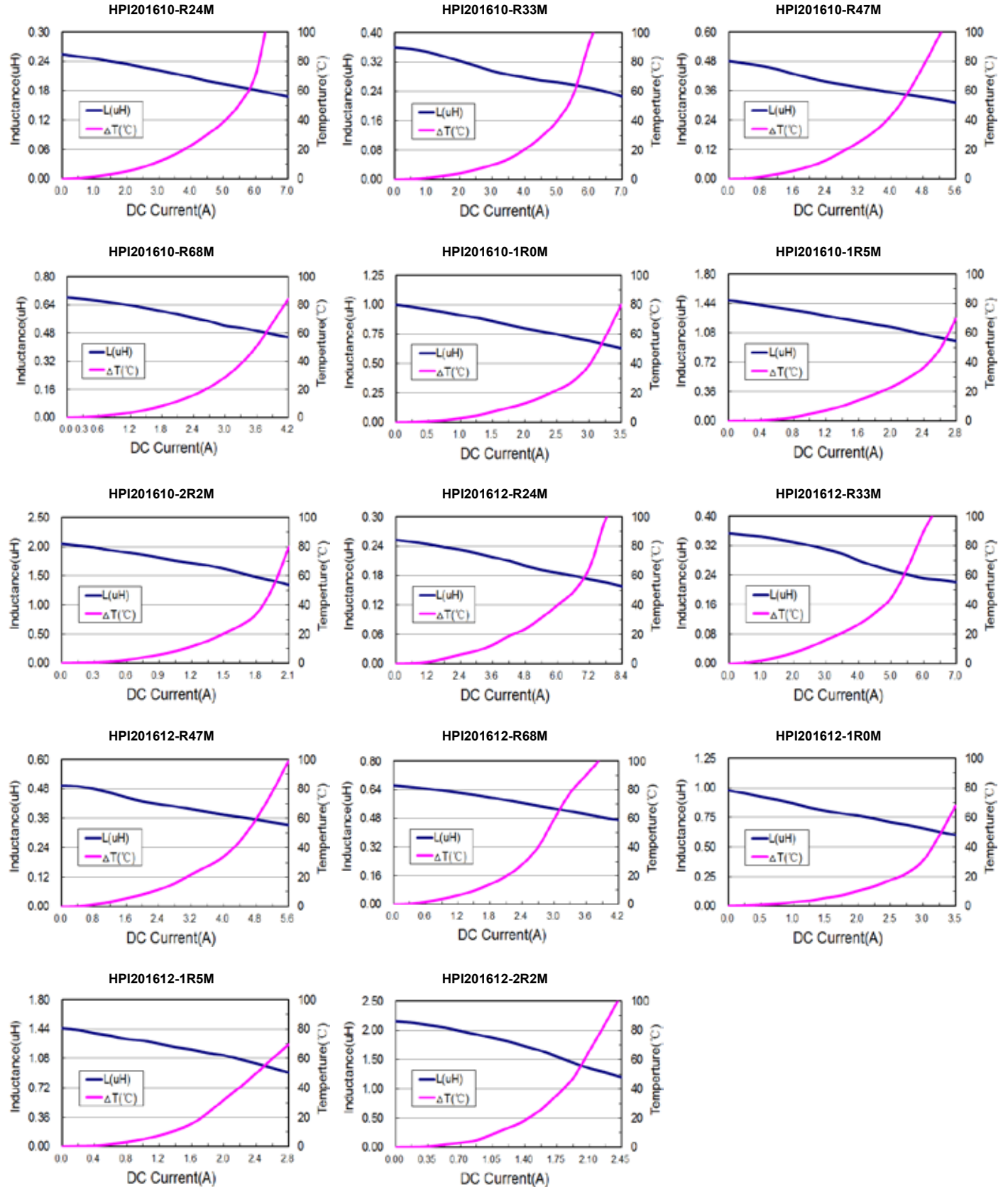
I rms (Max): DC current (A) that will cause an ΔT of 40°C Max

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.



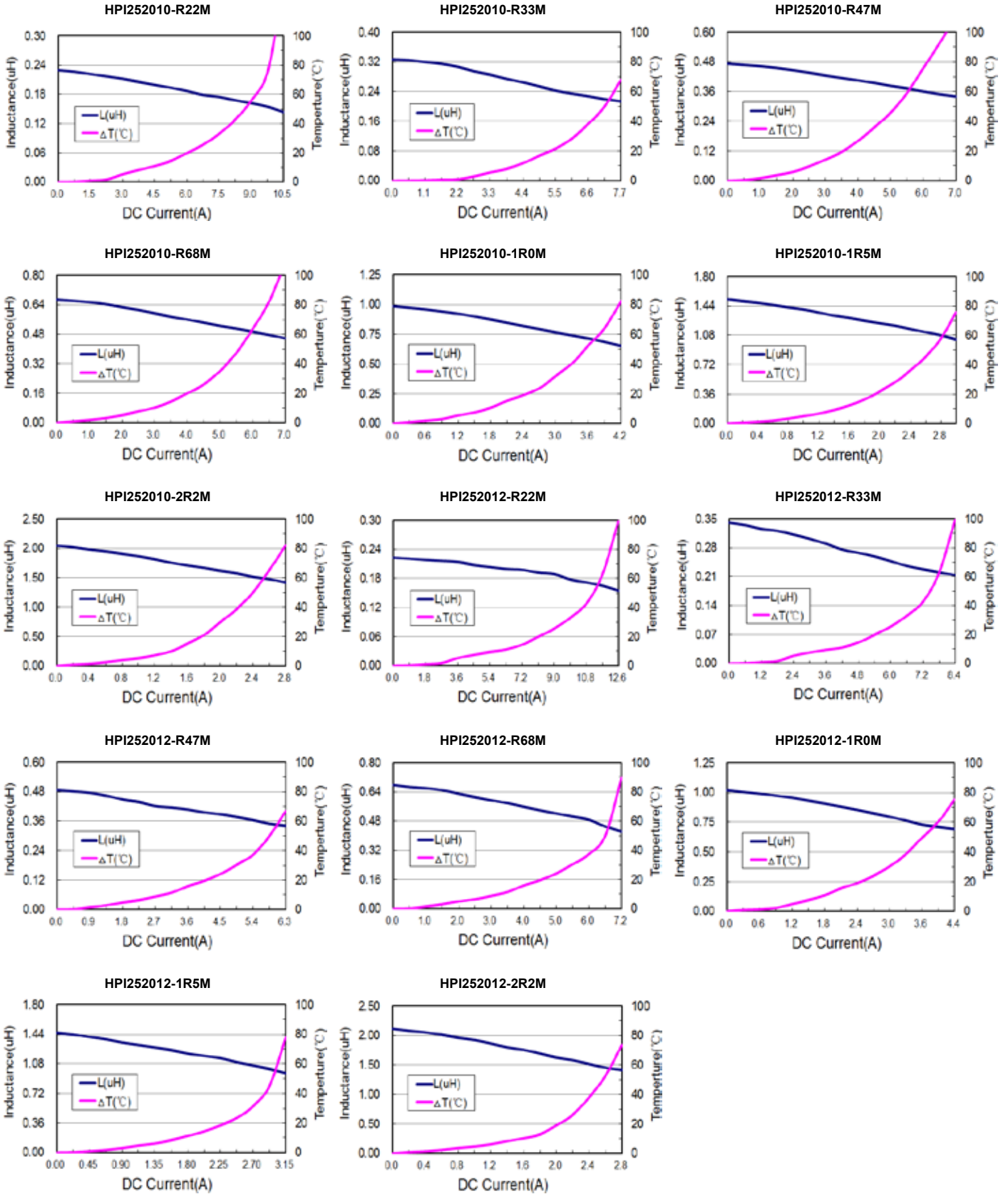
Typical performance curves :





Typical performance curves :

Power Inductor-SMT Type



\* 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.