



HPI2016/2520 P SERIES

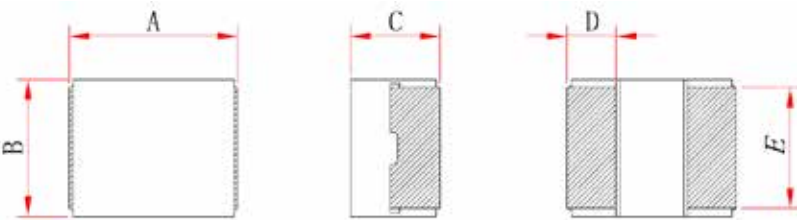
HIGH POWER INDUCTOR

Applications:

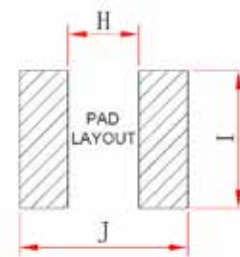
- DC/DC converter for CPU in Notebook PC
- Cellular phones, LCD displays, HDDs, DVCs, PDAs etc..
- Thin type on-board power supply module for exchanger
- VRM for server



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_{sat}) : The current will cause L₀ to drop approximately 30% typical
- Temperature Rise Current (I_{rms}) : 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

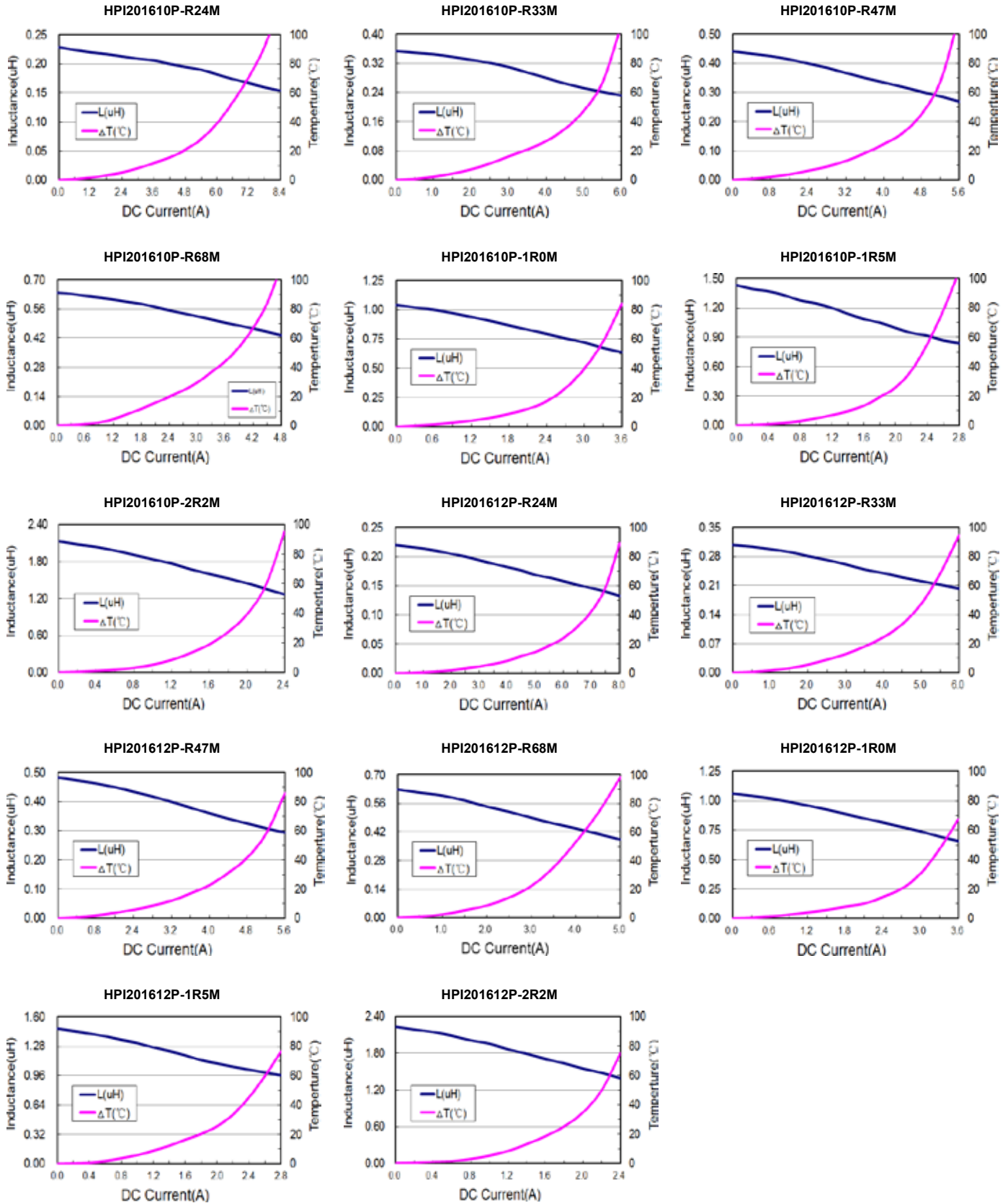
I rms (Max): DC current (A) that will cause an ΔT of 40°C Max

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 :



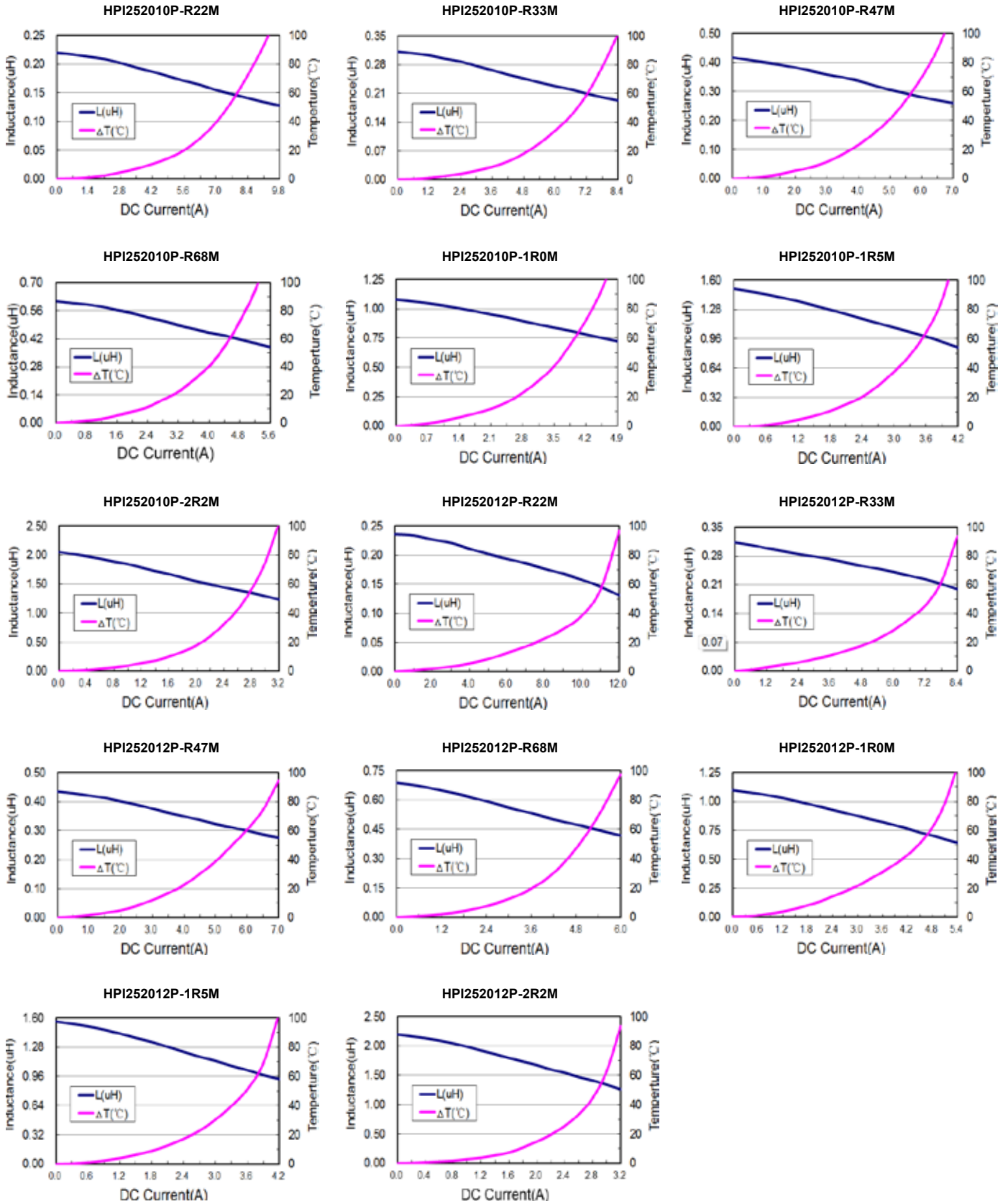
* Due to the limited space, the catalogue shows the typical specifications only. For more specific details (characteristics graph, reliability, and others), kindly invite you to access 3L official website www.3lcoil.com for better known.

Power Inductor-SMT Type



Typical performance curves :

Power Inductor-SMT Type



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