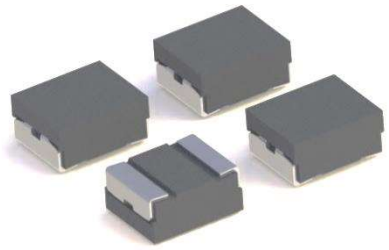
HPI20~05 Series INDEX

HPI 2016/2520 SERIES

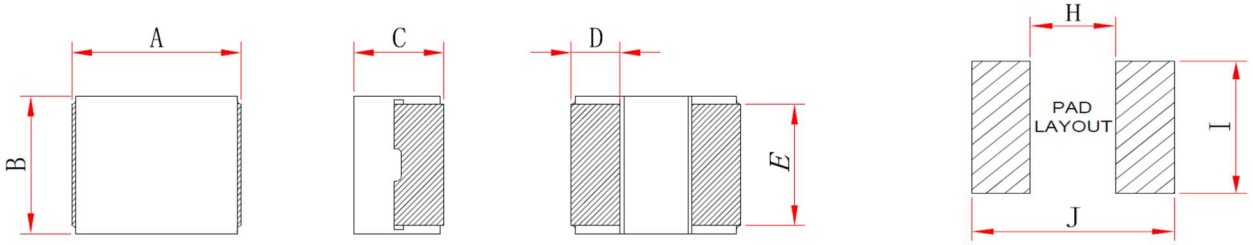
HIGH POWER INDUCTOR

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 (Dimensions are in mm) :



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.
- Compliance with RoHS and Halogen Free

Product Identification:

HPI 201610 – 1R0 M

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

(1) Product Symbol

(2) Dimensions :**201610** is size.

(3) Inductance: **1R0** for 1.0uH.

(4) Inductance tolerance: **M**: ± 20%

Characteristics:

- Saturation Current (Isat) : The current will cause L_0 to drop approximately 30% typical
- Temperature Rise Current (Irms) : The current will cause the coil temperature rise approximately △T=40℃
- Operating Temperature : -55℃ to 125℃

Measurement equipment :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Chroma16502 Milliohm Meter

● HPI201610 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(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	105.0	137.0	2.2	2.0	1.8	1.6
HPI201610-2R2M	2.2	20	174.0	197.0	1.9	1.6	1.6	1.4

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

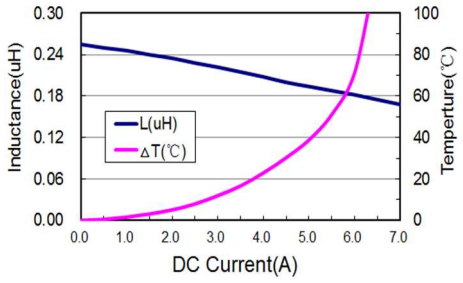
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

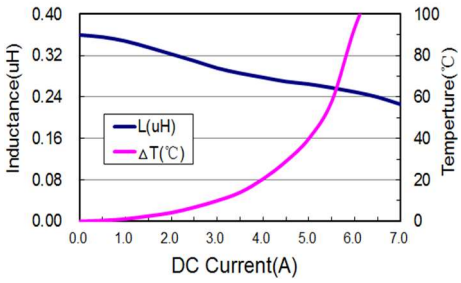
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

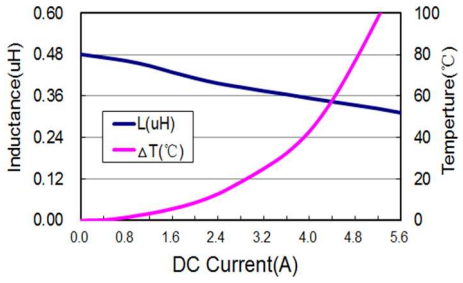
HPI201610-R24M



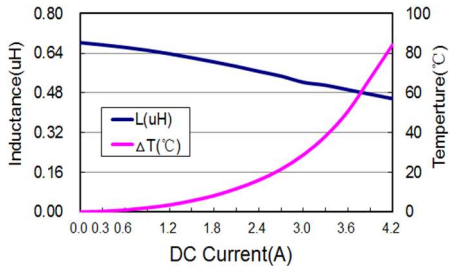
HPI201610-R33M



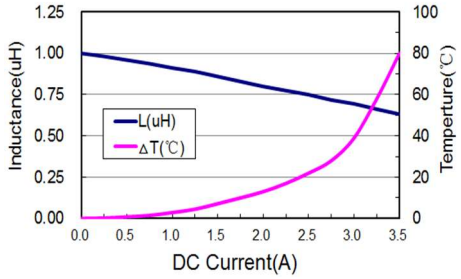
HPI201610-R47M



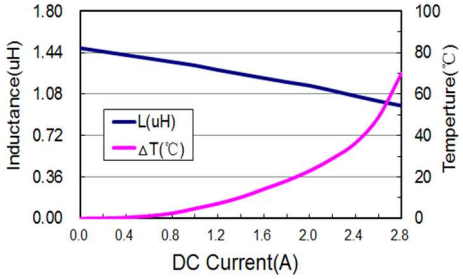
HPI201610-R68M



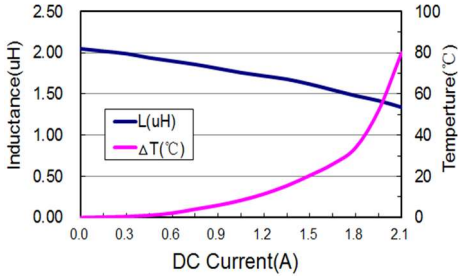
HPI201610-1R0M



HPI201610-1R5M



HPI201610-2R2M



● HPI201612 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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	112.0	2.4	2.2	1.9	1.7
HPI201612-2R2M	2.2	20	146.0	186.0	2.0	1.65	1.5	1.35

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

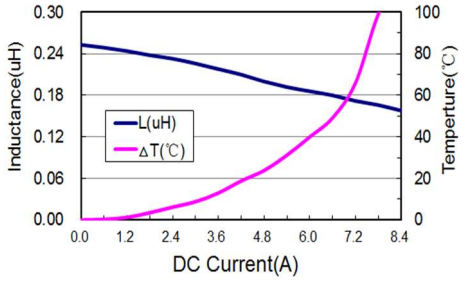
Note 3: Isat (Typ) : DC current（A）that will cause L0 to drop approximately 30%
Isat (Max) : DC current（A）that will cause L0 to drop 30% Max
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

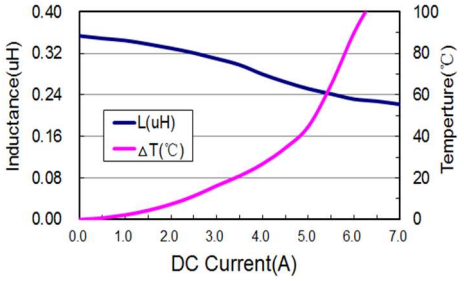
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

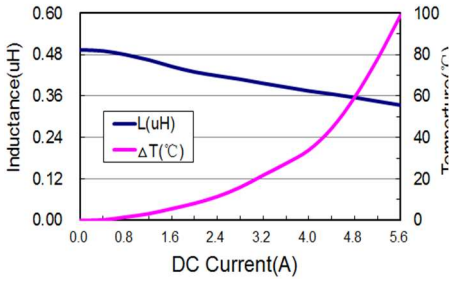
HPI201612-R24M



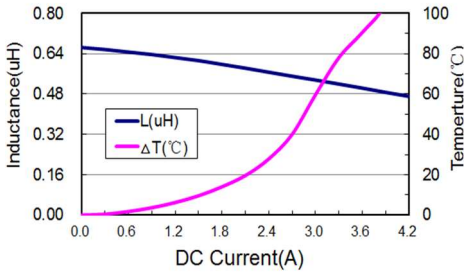
HPI201612-R33M



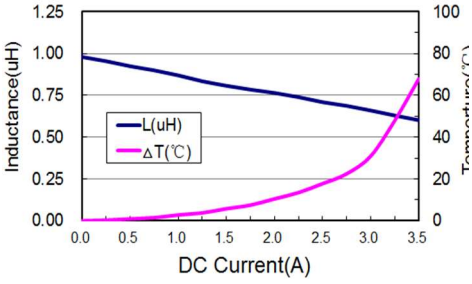
HPI201612-R47M



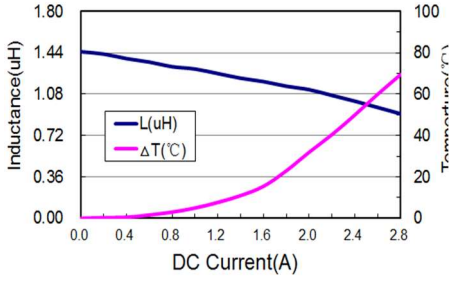
HPI201612-R68M



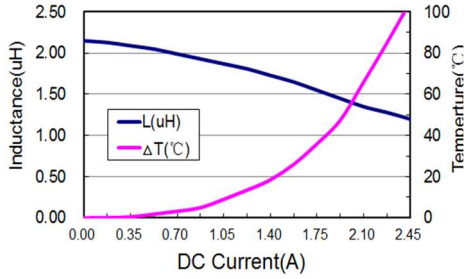
HPI201612-1R0M



HPI201612-1R5M



HPI201612-2R2M



● HPI252010 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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	110.0	121.0	2.4	2.1	1.8	1.62

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

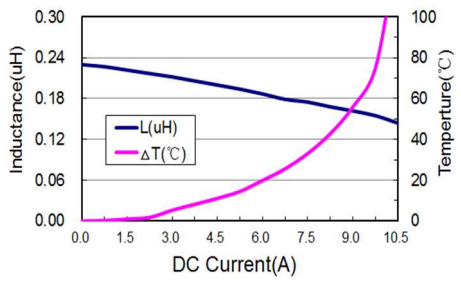
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

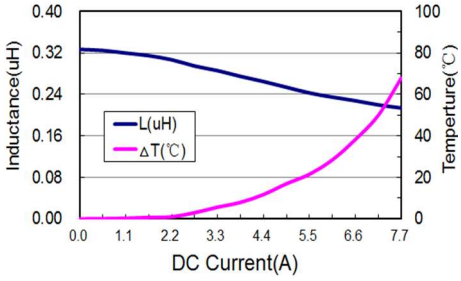
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

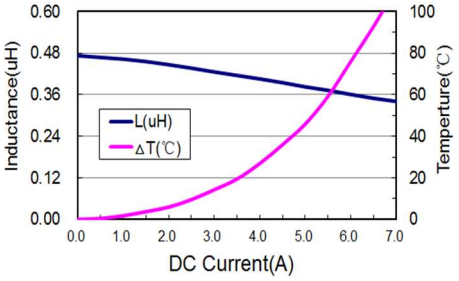
HPI252010-R22M



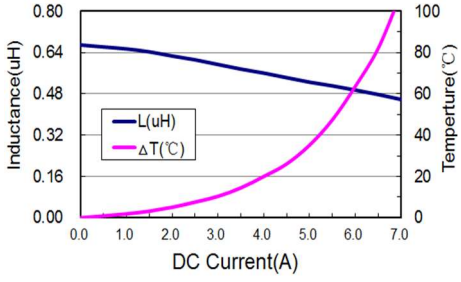
HPI252010-R33M



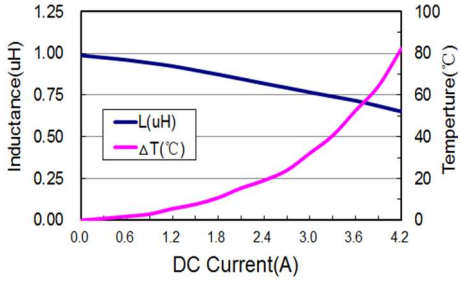
HPI252010-R47M



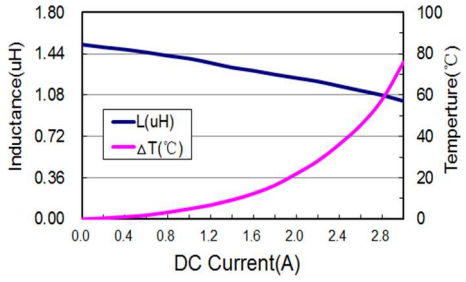
HPI252010-R68M



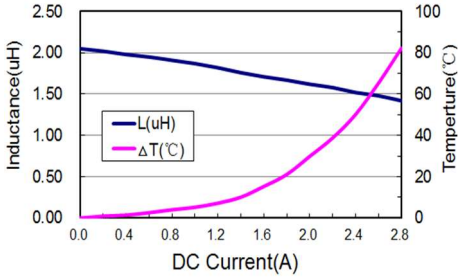
HPI252010-1R0M



HPI252010-1R5M



HPI252010-2R2M



● HPI252012 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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	105.0	2.5	2.2	2.3	2.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

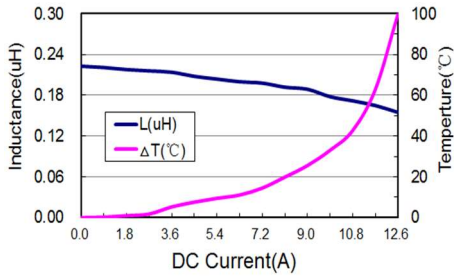
Note 3: Isat (Typ) : DC current（A）that will cause L0 to drop approximately 30%
Isat (Max) : DC current（A）that will cause L0 to drop 30% Max
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

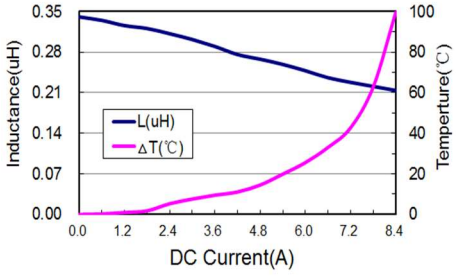
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

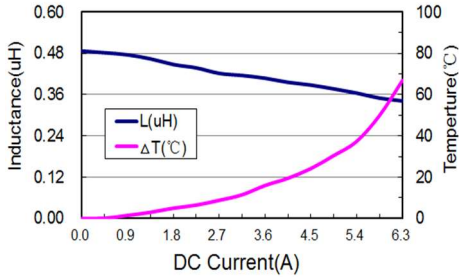
HPI252012-R22M



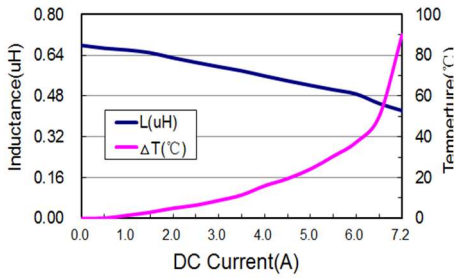
HPI252012-R33M



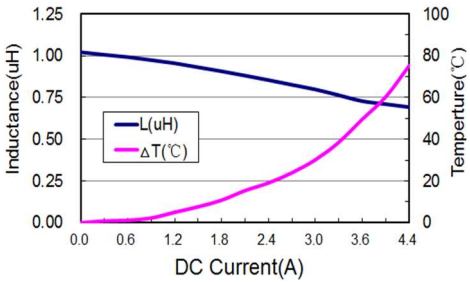
HPI252012-R47M



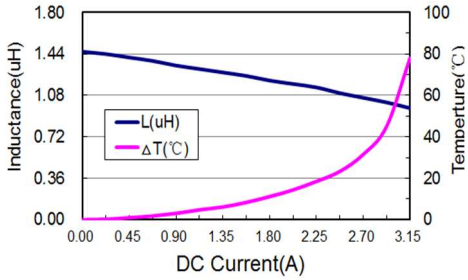
HPI252012-R68M



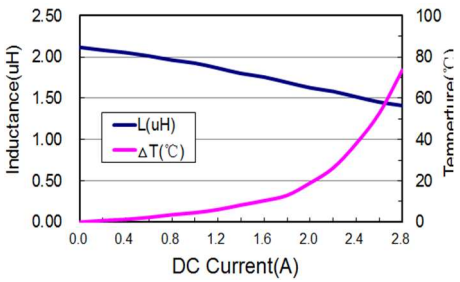
HPI252012-1R0M



HPI252012-1R5M



HPI252012-2R2M



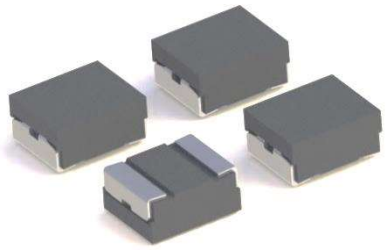
* Due to the limited space, the catalogue shows the typical specifications only. For more specific details (characteristics graph, reliability, and others), kindly invite you to access 3L official website www.3lcoil.com for better known.

HPI 2016/2520 P SERIES

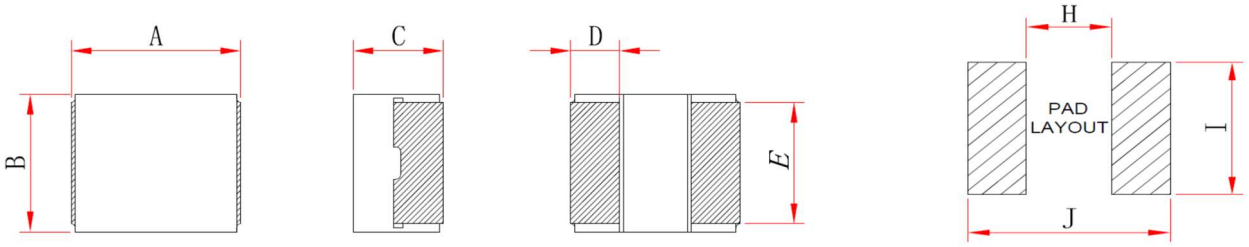
HIGH POWER INDUCTOR

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 (Dimensions are in mm) :



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 (Isat) 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.
- Compliance with RoHS and Halogen Free

Product Identification:

HPI 201610 P – 1R0 M

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

(1) Product Symbol

(2) Dimensions :**201610** is size.

(3) Special code: Extra low DCR

(4) Inductance: **1R0** for 1.0uH.

(5) Inductance tolerance: **M**: ± 20%

Characteristics:

- Saturation Current (Isat) : The current will cause L_0 to drop approximately 30% typical
- Temperature Rise Current (Irms) : The current will cause the coil temperature rise approximately △T=40℃.
- Operating Temperature : -55℃ to 125℃

Measurement equipment :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Chroma16502 Milliohm Meter

● HPI201610P Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(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	100.0	116.0	2.4	1.8	2.1	1.8
HPI201610P-2R2M	2.2	20	147.0	163.0	1.9	1.6	1.8	1.6

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

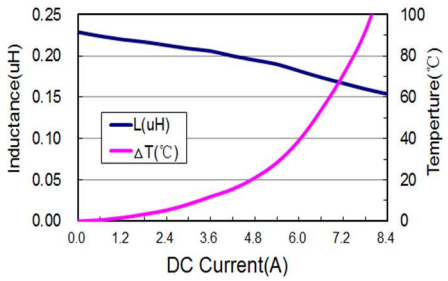
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

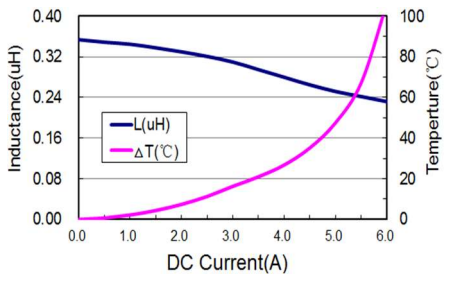
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

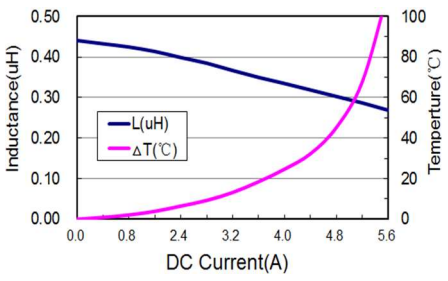
HPI201610P-R24M



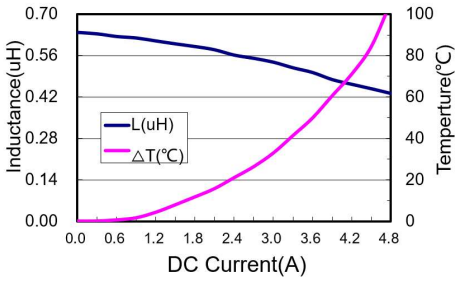
HPI201610P-R33M



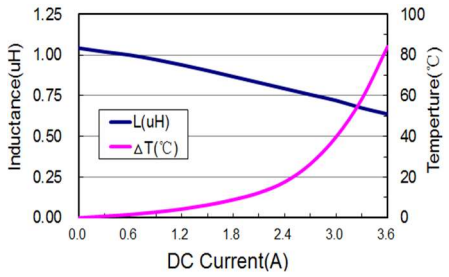
HPI201610P-R47M



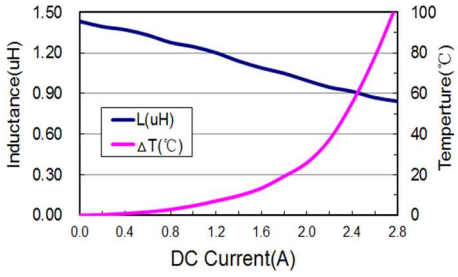
HPI201610P-R68M



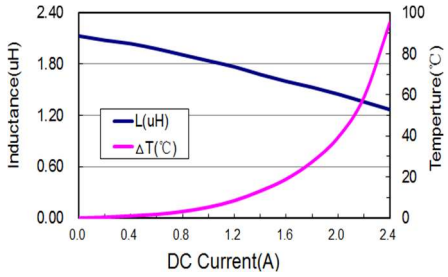
HPI201610P-1R0M



HPI201610P-1R5M



HPI201610P-2R2M



● HPI201612P Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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	104.0	2.3	2.0	2.2	2.0
HPI201612P-2R2M	2.2	20	120.0	144.0	2.0	1.65	1.8	1.6

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

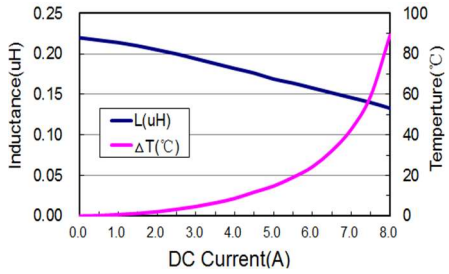
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

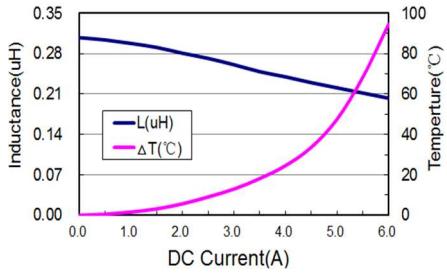
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

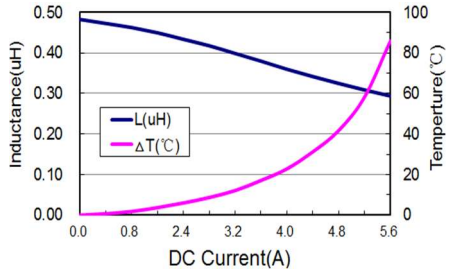
HPI201612P-R24M



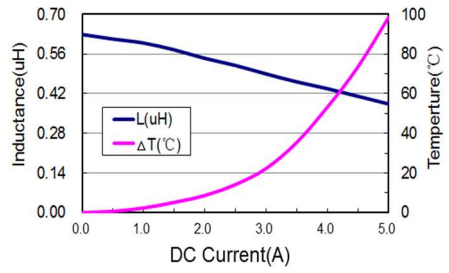
HPI201612P-R33M



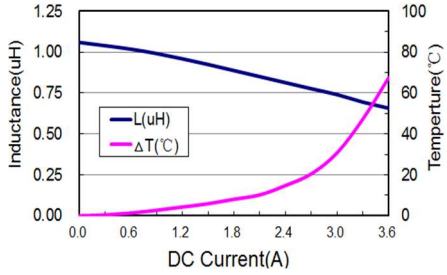
HPI201612P-R47M



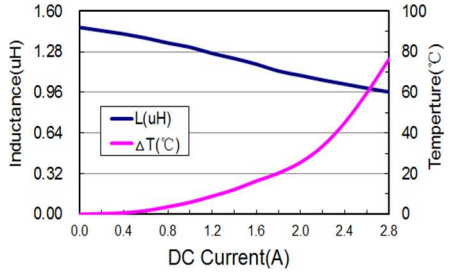
HPI201612P-R68M



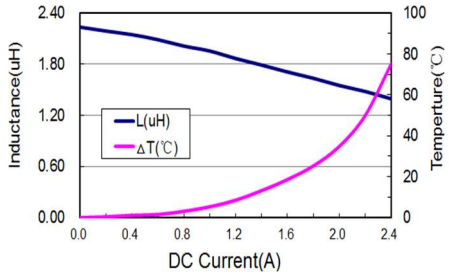
HPI201612P-1R0M



HPI201612P-1R5M



HPI201612P-2R2M



● HPI252010P Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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	105.0	2.6	2.2	2.0	1.8

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

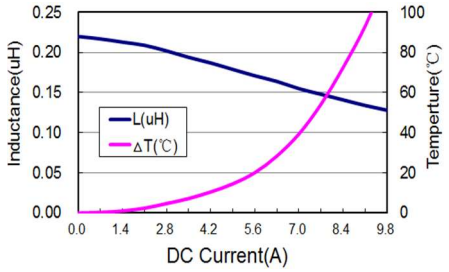
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

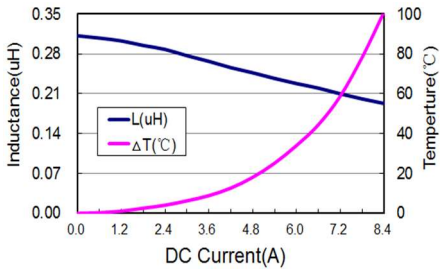
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

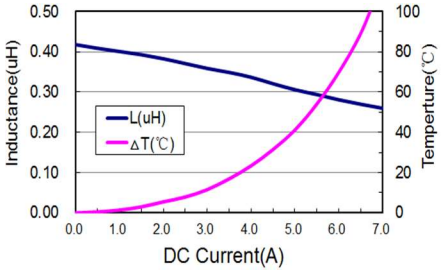
HPI252010P-R22M



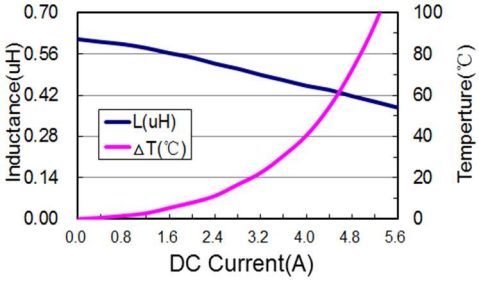
HPI252010P-R33M



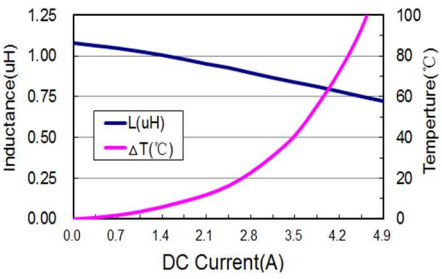
HPI252010P-R47M



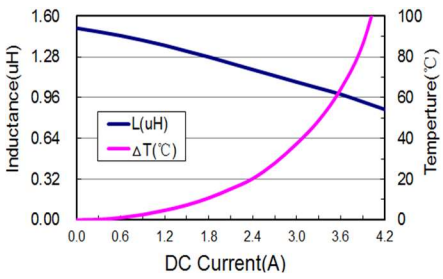
HPI252010P-R68M



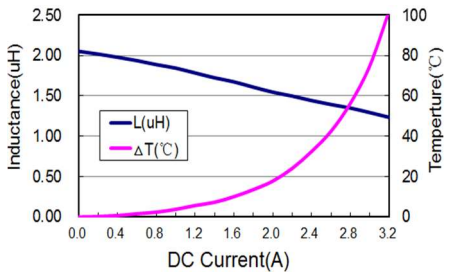
HPI252010P-1R0M



HPI252010P-1R5M



HPI252010P-2R2M



● HPI252012P Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
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
HPI252012P-3R3M	3.3	20	135.9	144.0	2.0	1.8	1.75	1.55

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 20℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

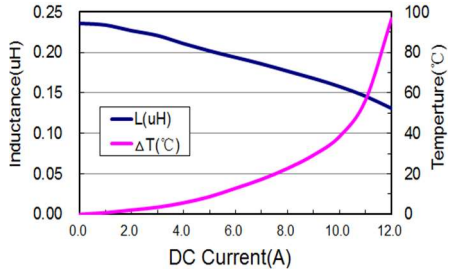
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

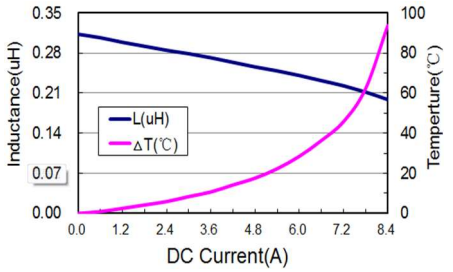
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical performance curves :

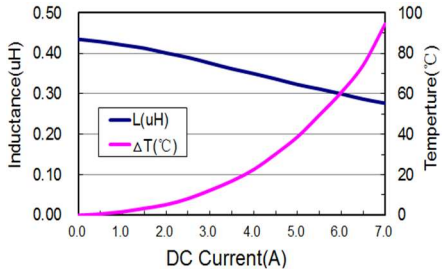
HPI252012P-R22M



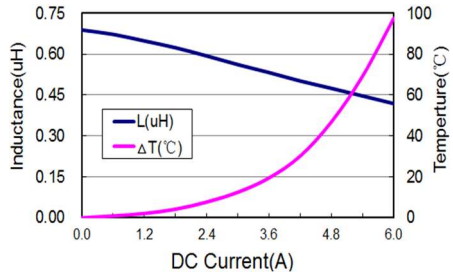
HPI252012P-R33M



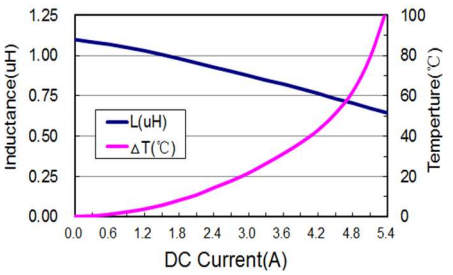
HPI252012P-R47M



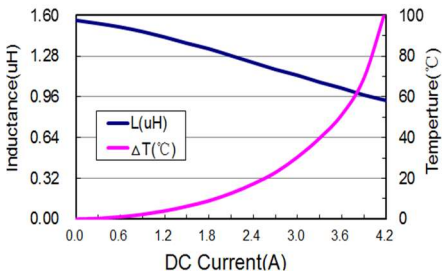
HPI252012P-R68M



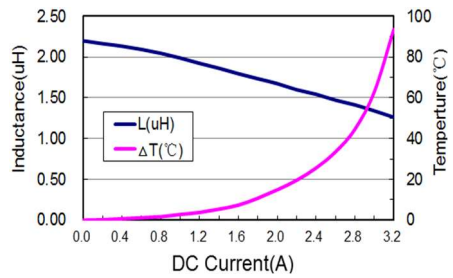
HPI252012P-1R0M



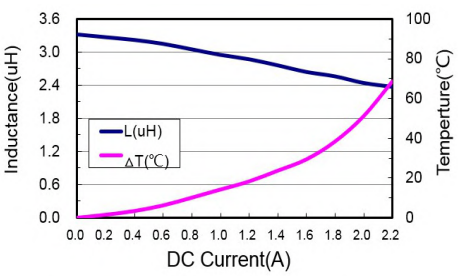
HPI252012P-1R5M



HPI252012P-2R2M



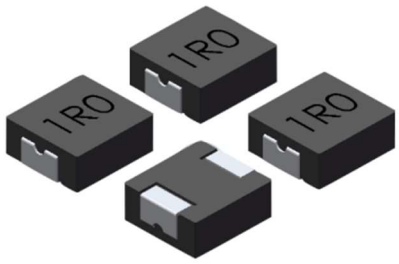
HPI252012P-3R3M



* 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.

HPI 03 SERIES

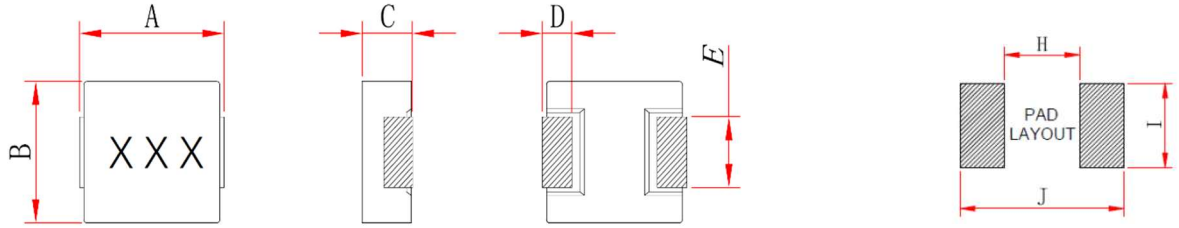
HIGH POWER INDUCTOR



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 (Dimensions are in mm) :



Item	A	B	C	D	E	H	I	J
HPI0310	3.4±0.2	3.0±0.2	0.8±0.2	0.7±0.3	1.3±0.2	1.2	2.0	4.2
HPI0312	3.4±0.2	3.0±0.2	1.0±0.2	0.7±0.3	1.3±0.2	1.2	2.0	4.2
HPI0315	3.4±0.2	3.0±0.2	1.3±0.2	0.7±0.3	1.3±0.2	1.2	2.0	4.2
HPI0302	3.4±0.2	3.0±0.2	1.8±0.2	0.7±0.3	1.3±0.2	1.2	2.0	4.2

Features :

- High performance (Isat) realized by metal dust core.
- Low profile: 1.0~2.0mm
- Low loss realized with low DCR
- Magnetically Shielded.
- Compliance with RoHS and Halogen Free

Product Identification:

HPI 0310 – 1R0 M

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

(1) Product Symbol

(2) Dimensions Code

(3) Inductance: **1R0** for 1.0uH.

(4) Inductance tolerance: **M**: ± 20%

Characteristics:

- Saturation Current (Isat) : The current will cause L_0 to drop approximately 30% typical
- Temperature Rise Current (Irms) : The current will cause the coil temperature rise approximately △T=40℃.
- Operating Temperature : -55℃ to 125℃

Measurement equipment :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Chroma16502 Milliohm Meter

● HPI0310 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0310-R22M	0.22	20	11.0	14.0	11.0	9.0	7.0	5.5
HPI0310-R33M	0.33	20	16.4	20.0	10.0	9.0	6.0	4.0
HPI0310-R47M	0.47	20	22.0	24.0	7.0	6.0	4.0	3.0
HPI0310-1R0M	1.0	20	40.0	48.0	5.0	4.0	2.8	2.4
HPI0310-1R5M	1.5	20	72.0	90.0	3.5	2.8	2.4	2.0
HPI0310-2R2M	2.2	20	105.0	124.0	3.0	2.4	1.8	1.5
HPI0310-100M	10.0	20	380.0	430.0	1.4	1.2	0.9	0.7

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

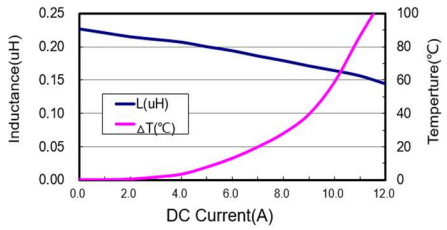
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

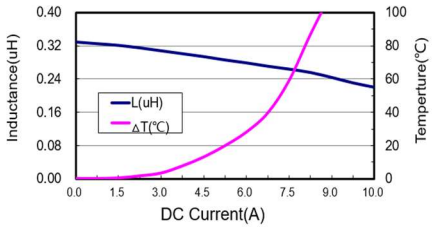
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

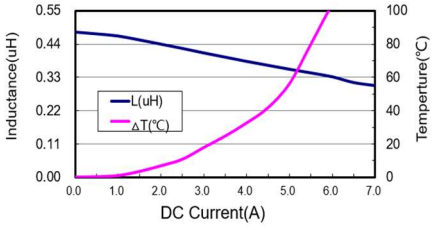
HPI0310-R22M



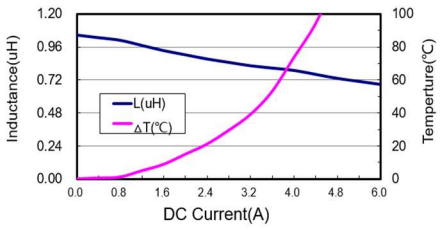
HPI0310-R33M



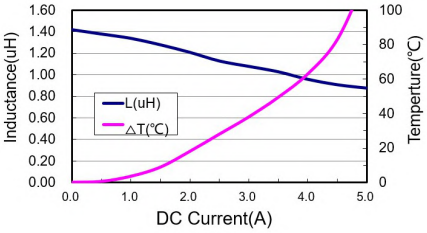
HPI0310-R47M



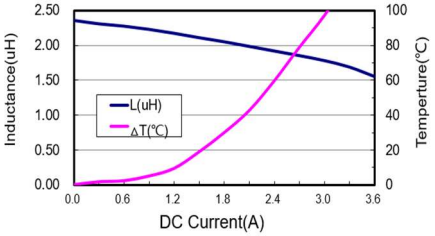
HPI0310-1R0M



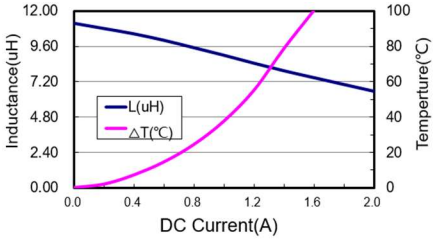
HPI0310-1R5M



HPI0310-2R2M



HPI0310-100M



● HPI0312 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0312-R22M	0.22	20	9.6	12.0	12.0	11.0	9.0	7.5
HPI0312-R33M	0.33	20	15.8	18.0	9.6	8.6	7.2	6.2
HPI0312-R47M	0.47	20	22.0	25.0	8.2	7.2	6.2	4.2
HPI0312-1R0M	1.0	20	39.2	45.0	5.8	5.0	4.0	3.0
HPI0312-2R2M	2.2	20	88.0	102.0	4.0	3.5	2.5	2.1
HPI0312-3R3M	3.3	20	136.0	155.0	2.4	2.0	1.8	1.4
HPI0312-4R7M	4.7	20	160.0	190.0	2.0	1.8	1.4	0.9
HPI0312-100M	10.0	20	313.0	360.0	1.5	1.2	1.0	0.8

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

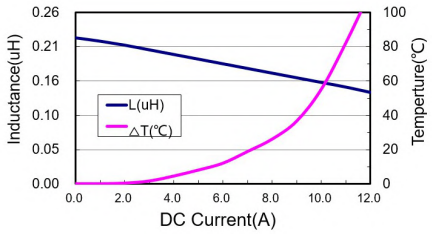
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

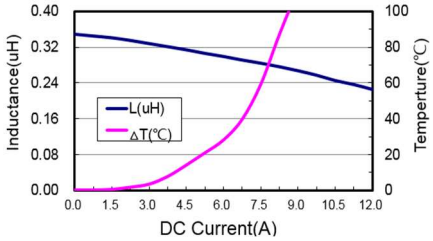
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

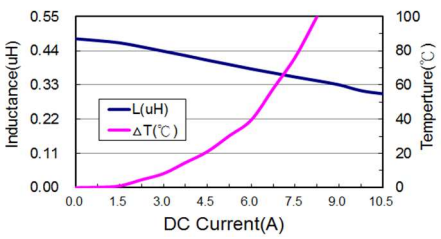
HPI0312-R22M



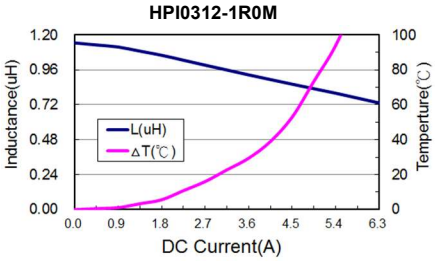
HPI0312-R33M



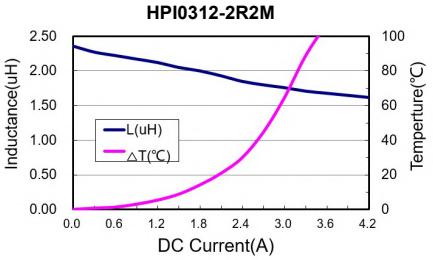
HPI0312-R47M



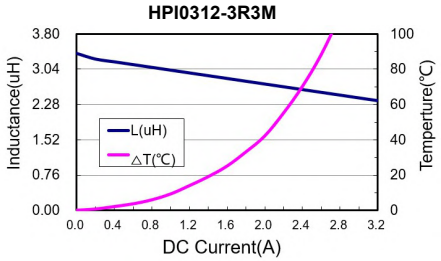
HPI0312-1R0M



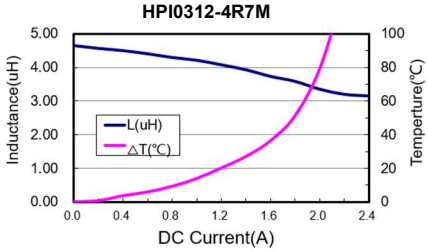
HPI0312-2R2M



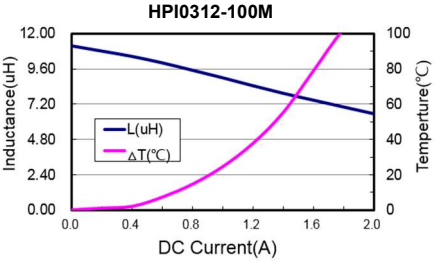
HPI0312-3R3M



HPI0312-4R7M



HPI0312-100M



● HPI0315 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0315-R47M	0.47	20	19.0	22.0	9.0	7.5	7.0	5.0
HPI0315-1R0M	1.0	20	36.0	42.0	6.2	5.2	4.5	3.5
HPI0315-1R5M	1.5	20	50.0	60.0	5.8	4.8	3.8	3.0
HPI0315-2R2M	2.2	20	72.0	85.0	5.0	4.0	3.2	2.6
HPI0315-3R3M	3.3	20	92.0	110.0	3.5	3.0	2.2	1.5
HPI0315-100M	10.0	20	313.0	360.0	2.0	1.5	1.2	0.9

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

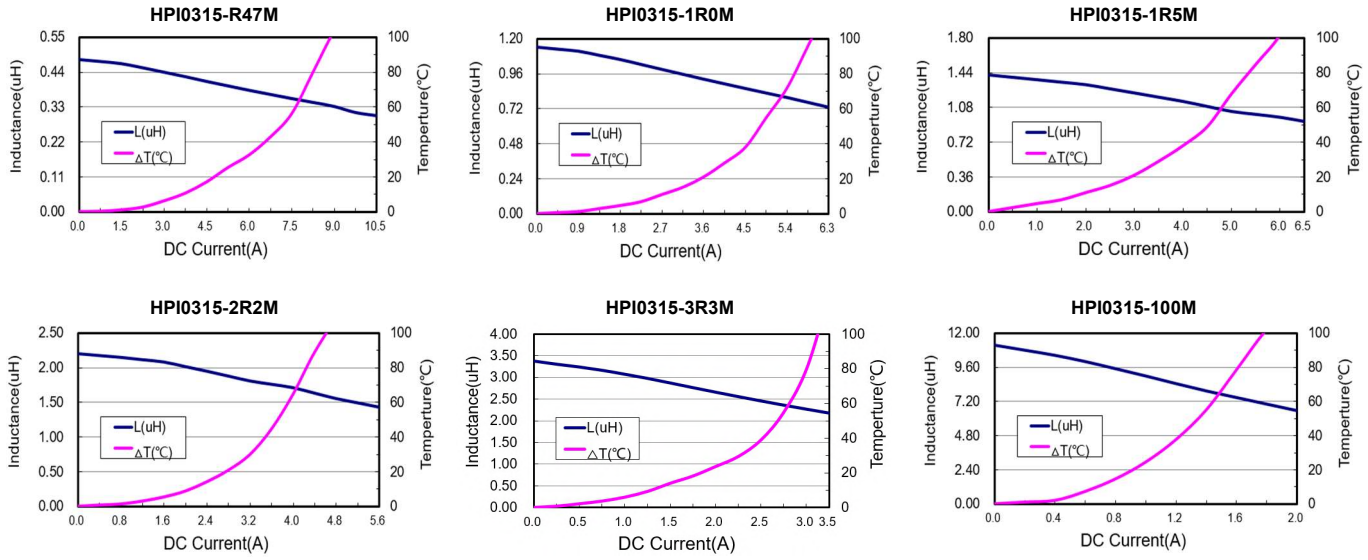
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

Irms (Max) : DC current（A）that will cause an ΔT of 40℃ 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:



● HPI0302 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0302-R22M	0.22	20	8.0	10.0	16.0	13.0	10.0	8.0
HPI0302-R47M	0.47	20	15.0	18.0	12.0	10.0	8.0	6.5
HPI0302-R68M	0.68	20	22.0	26.0	10.0	8.5	7.0	5.5
HPI0302-1R0M	1.0	20	25.0	30.0	8.0	6.5	5.0	4.0
HPI0302-1R5M	1.5	20	34.0	39.0	6.0	5.0	4.2	3.2
HPI0302-2R2M	2.2	20	60.0	69.0	4.8	4.0	3.3	2.8
HPI0302-3R3M	3.3	20	70.0	83.0	4.0	3.5	2.8	2.2
HPI0302-4R7M	4.7	20	120.0	144.0	3.5	3.0	2.4	2.0
HPI0302-6R8M	6.8	20	153.0	184.0	3.0	2.6	1.6	1.2

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

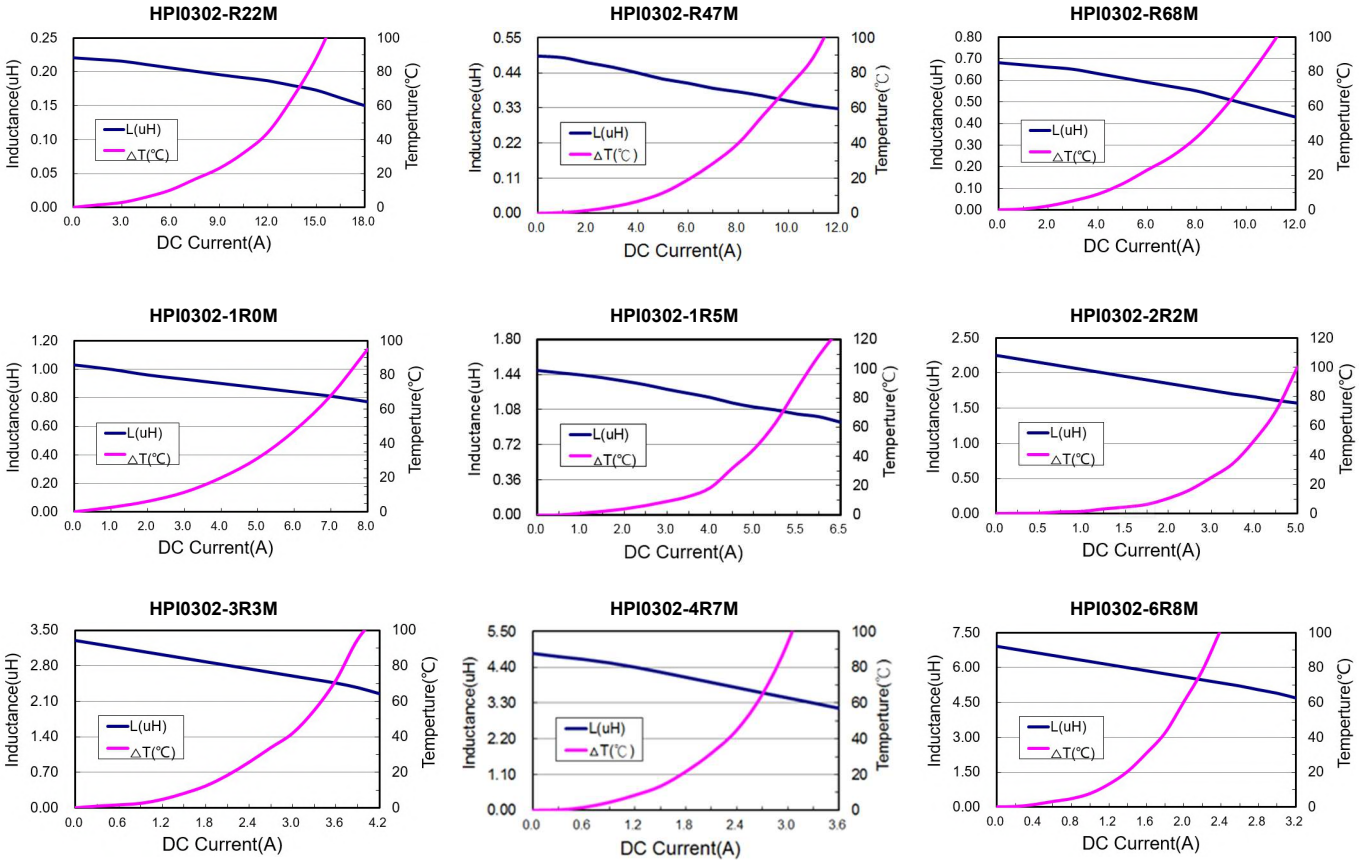
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

Irms (Max) : DC current（A）that will cause an ΔT of 40℃ 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.

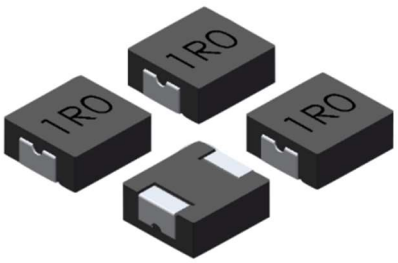
Typical Performance curves:



* 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.

HPI 04 SERIES

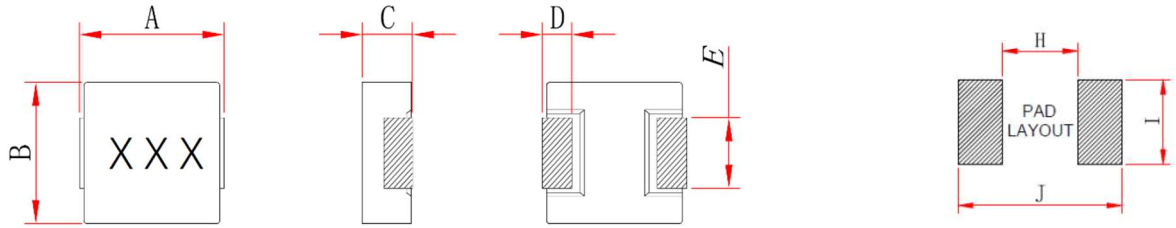
HIGH POWER INDUCTOR



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 (Dimensions are in mm) :



Item	A	B	C	D	E	H	I	J
HPI0410	4.4±0.2	4.0±0.2	0.8±0.2	0.76±0.3	2.0±0.3	2.16	2.30	4.95
HPI0412	4.4±0.2	4.0±0.2	1.0±0.2	0.76±0.3	2.0±0.3	2.16	2.30	4.95
HPI0415	4.4±0.2	4.0±0.2	1.3±0.2	0.76±0.3	2.0±0.3	2.16	2.30	4.95
HPI0402	4.4±0.2	4.0±0.2	1.8±0.2	0.76±0.3	2.0±0.3	2.16	2.30	4.95

Features :

- High performance (Isat) realized by metal dust core.
- Low profile: 1.0~2.0mm
- Low loss realized with low DCR
- Magnetically Shielded.
- Compliance with RoHS and Halogen Free

Product Identification:

HPI 0410 – 1R0 M

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

(1) Product Symbol

(2) Dimensions Code

(3) Inductance: **1R0** for 1.0uH.

(4) Inductance tolerance: **M**: ± 20%

Characteristics:

- Saturation Current (Isat) : The current will cause L_0 to drop approximately 30% typical
- Temperature Rise Current (Irms) : The current will cause the coil temperature rise approximately △T=40℃.
- Operating Temperature : -55℃ to 125℃

Measurement equipment :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Chroma16502 Milliohm Meter

● HPI0410 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0410-R47M	0.47	20	15.2	18.5	11.0	9.0	8.5	7.0
HPI0410-1R0M	1.0	20	35.0	42.0	6.5	5.5	4.2	3.5
HPI0410-2R2M	2.2	20	90.0	108.0	4.5	4.0	2.8	2.4
HPI0410-6R8M	6.8	20	248.0	298.0	2.8	2.2	1.4	1.1
HPI0410-100M	10.0	20	270.0	400.0	1.6	1.5	0.8	0.7

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

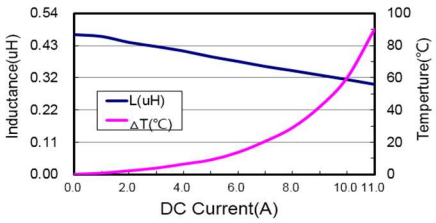
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

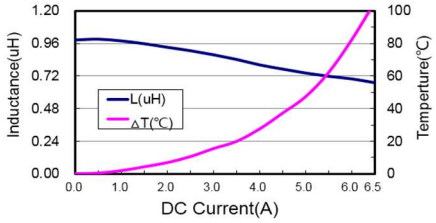
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

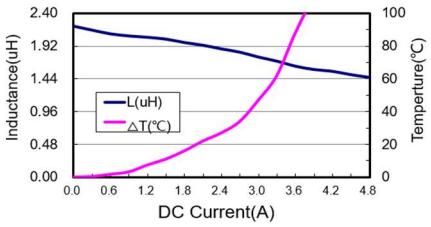
HPI0410-R47M



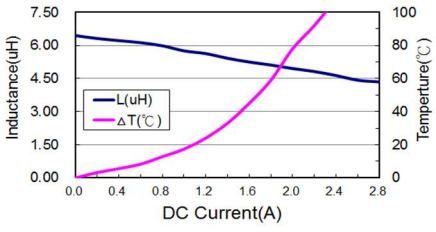
HPI0410-1R0M



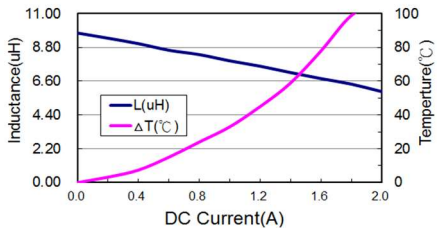
HPI0410-2R2M



HPI0410-6R8M



HPI0410-100M



● HPI0412 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0412-R33M	0.33	20	12.0	14.5	14.0	12.0	10.0	8.0
HPI0412-R47M	0.47	20	16.8	20.0	9.5	8.0	8.8	7.0
HPI0412-R68M	0.68	20	19.0	23.0	9.0	7.0	6.0	5.0
HPI0412-1R0M	1.0	20	36.5	43.0	7.8	6.2	5.2	4.5
HPI0412-1R5M	1.5	20	54.5	62.0	6.2	5.4	4.2	3.5
HPI0412-2R2M	2.2	20	72.0	80.0	5.0	4.2	3.3	2.8
HPI0412-3R3M	3.3	20	97.0	111.0	4.5	3.9	2.8	2.4
HPI0412-4R7M	4.7	20	119.0	143.0	3.2	2.8	2.2	1.8

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

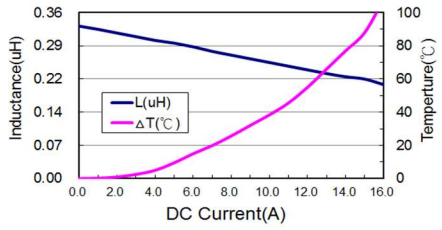
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

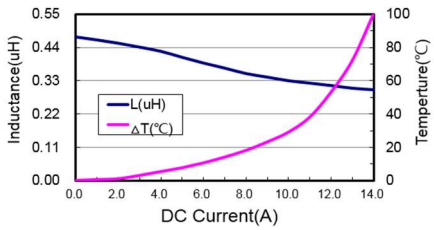
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

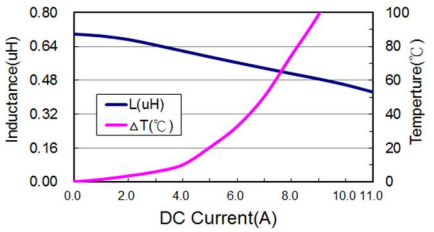
HPI0412-R33M



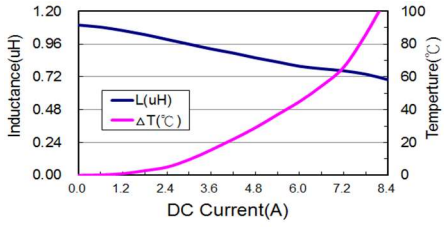
HPI0412-R47M



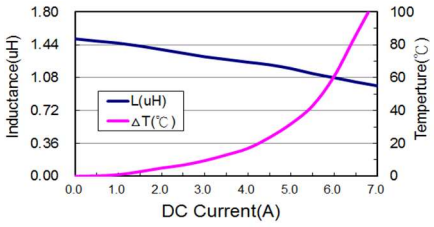
HPI0412-R68M



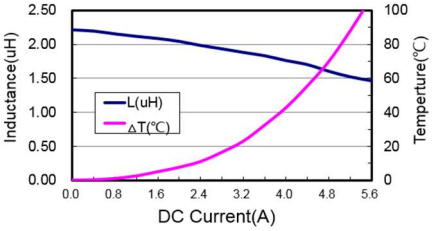
HPI0412-1R0M



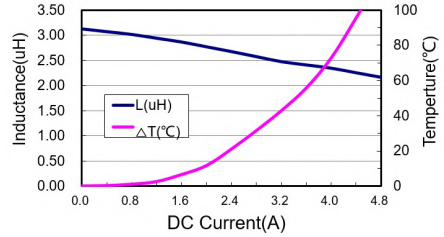
HPI0412-1R5M



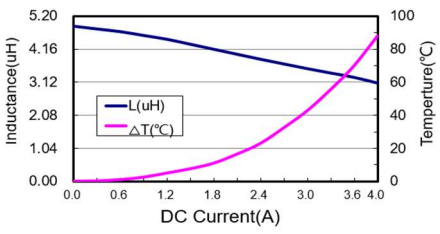
HPI0412-2R2M



HPI0412-3R3M



HPI0412-4R7M



● HPI0415 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0415-R22M	0.22	20	7.3	8.8	20.0	15.0	11.0	9.0
HPI0415-R47M	0.47	20	17.8	22.0	13.0	11.0	8.8	7.0
HPI0415-1R0M	1.0	20	28.5	33.5	8.0	6.5	5.5	5.0
HPI0415-1R5M	1.5	20	45.0	55.0	6.0	5.0	3.8	3.3
HPI0415-2R2M	2.2	20	53.0	62.5	5.5	4.5	3.5	3.0
HPI0415-100M	10.0	20	232.0	282.0	1.8	1.4	1.2	1.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

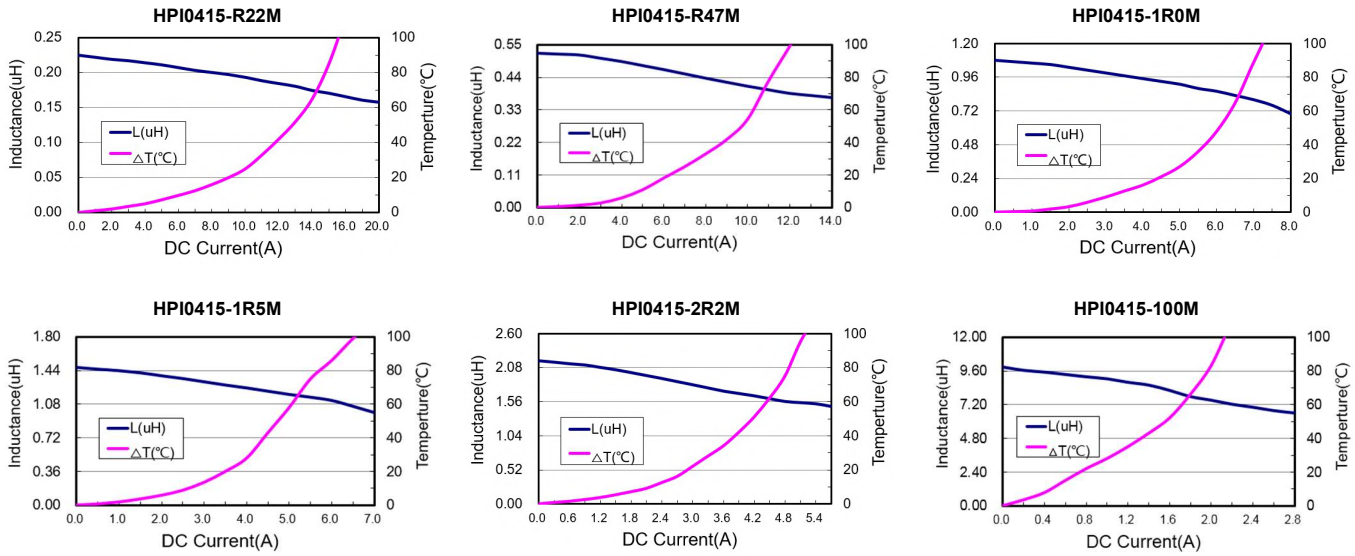
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

Irms (Max) : DC current（A）that will cause an ΔT of 40℃ 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:



● HPI0402 Series

Part No.	Inductance L(uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0402-R12M	0.12	20	4.2	4.8	30.0	24.0	15.0	12.0
HPI0402-R22M	0.22	20	6.2	7.4	24.0	18.0	14.0	12.0
HPI0402-R33M	0.33	20	7.5	10.2	15.0	12.0	11.0	9.0
HPI0402-R47M	0.47	20	9.4	11.3	14.0	12.0	10.0	8.0
HPI0402-R68M	0.68	20	13.3	16.0	12.0	11.0	9.0	7.0
HPI0402-1R0M	1.0	20	16.4	20.0	9.0	7.2	6.5	5.5
HPI0402-1R5M	1.5	20	22.0	26.4	7.5	6.5	4.8	4.0
HPI0402-2R2M	2.2	20	31.5	38.0	6.0	5.5	4.0	3.5
HPI0402-3R3M	3.3	20	45.0	54.0	5.0	4.5	3.5	3.0
HPI0402-4R7M	4.7	20	58.0	70.0	4.5	4.0	3.0	2.2
HPI0402-100M	10.0	20	170.0	190.0	3.5	3.0	2.0	1.8
HPI0402-220M	22.0	20	265.0	320.0	2.1	1.8	1.2	1.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

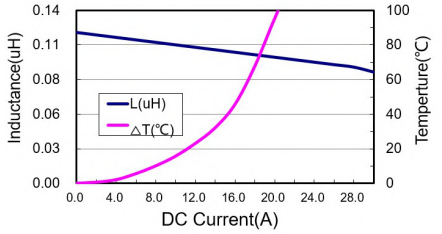
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

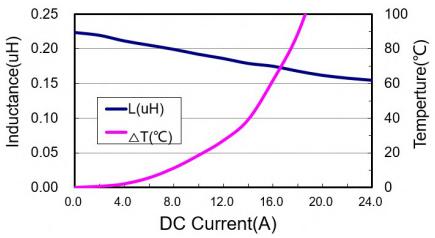
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

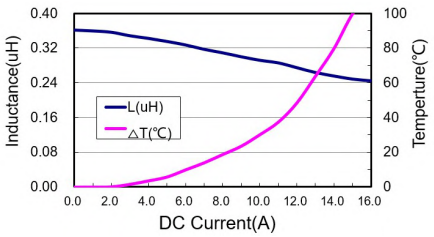
HPI0402-R12M



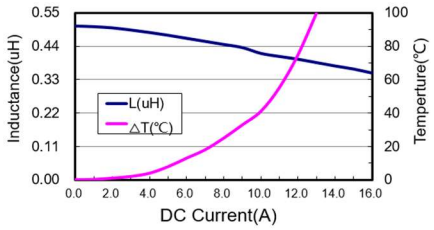
HPI0402-R22M



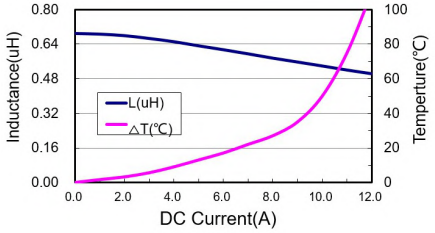
HPI0402-R33M



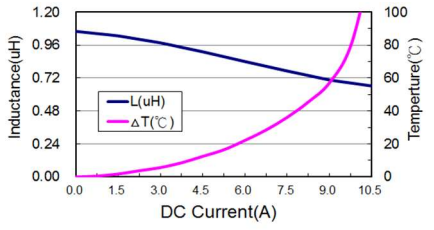
HPI0402-R47M



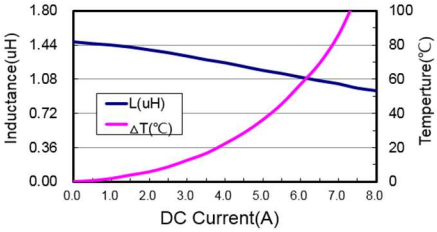
HPI0402-R68M



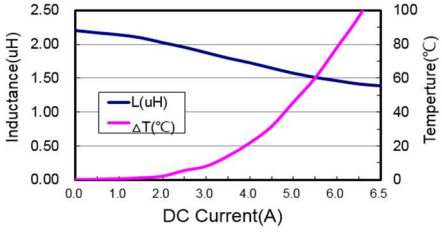
HPI0402-1R0M



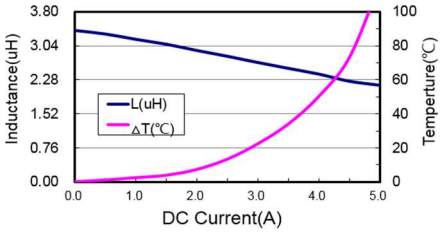
HPI0402-1R5M



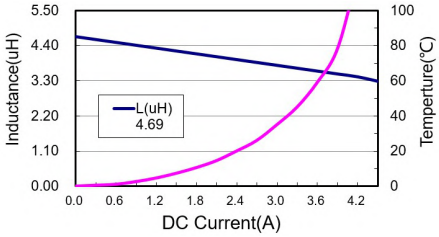
HPI0402-2R2M



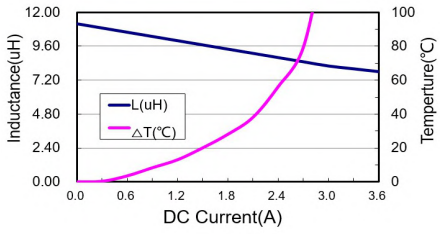
HPI0402-3R3M



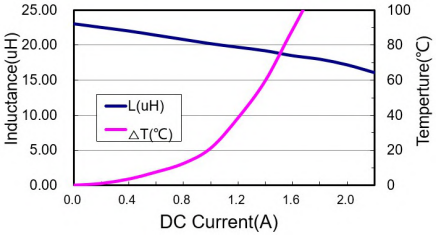
HPI0402-4R7M



HPI0402-100M



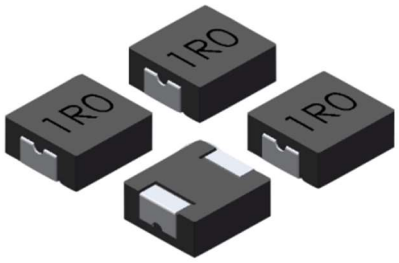
HPI0402-220M



* 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.

HPI 05 SERIES

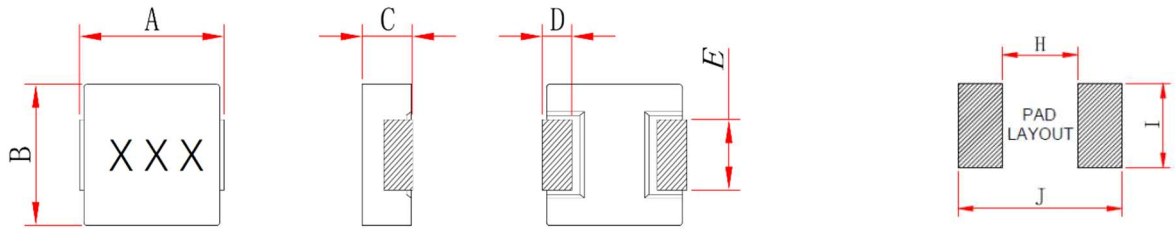
HIGH POWER INDUCTOR



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 (Dimensions are in mm) :



Item	A	B	C	D	E	H	I	J
HPI0510	5.5±0.2	5.2±0.2	0.8±0.2	1.02±0.3	2.5±0.3	2.16	2.79	5.99
HPI0512	5.5±0.2	5.2±0.2	1.0±0.2	1.02±0.3	2.5±0.3	2.16	2.79	5.99
HPI0515	5.5±0.2	5.2±0.2	1.3±0.2	1.02±0.3	2.5±0.3	2.16	2.79	5.99
HPI0518	5.5±0.2	5.2±0.2	1.6±0.2	1.02±0.3	2.5±0.3	2.16	2.79	5.99
HPI0502	5.5±0.2	5.2±0.2	1.8±0.2	1.02±0.3	2.5±0.3	2.16	2.79	5.99

Features :

- High performance (Isat) realized by metal dust core.
- Low profile: 1.0~2.0mm
- Low loss realized with low DCR
- Magnetically Shielded.
- Compliance with RoHS and Halogen Free

Product Identification:

HPI 0510 – 1R0 M

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

(1) Product Symbol

(2) Dimensions Code

(3) Inductance: **1R0** for 1.0uH.

(4) Inductance tolerance: **M**: ± 20%

Characteristics:

- Saturation Current (Isat) : The current will cause L_0 to drop approximately 30% typical
- Temperature Rise Current (Irms) : The current will cause the coil temperature rise approximately △T=40℃.
- Operating Temperature : -55℃ to 125℃

Measurement equipment :

- L: Agilent E4980 Precision LCR Meter (Upgraded version of Agilent HP4284A) with HP42841A Current Source
- DCR: Chroma16502 Milliohm Meter

● HPI0510 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0510-1R0M	1.0	20	42.8	52.0	9.4	7.8	3.5	3.0
HPI0510-2R2M	2.2	20	87.0	105.0	4.5	3.8	3.0	2.5
HPI0510-4R7M	4.7	20	158.0	190.0	4.0	3.5	2.2	2.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

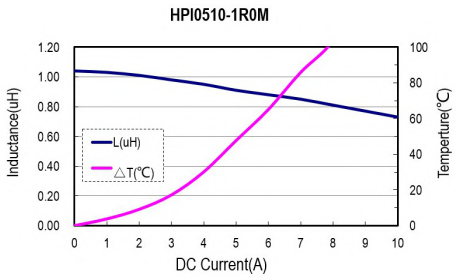
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

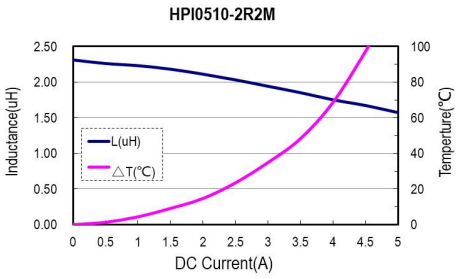
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

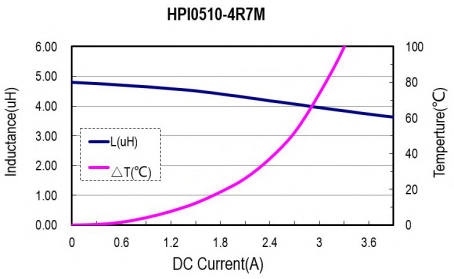
Note 4: Operating temperature range includes self-temperature rise.

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:







● HPI0512 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0512-1R0M	1.0	20	27.6	31.8	9.0	8.2	5.7	4.8
HPI0512-2R2M	2.2	20	55.0	66.0	5.2	4.2	4.0	3.5
HPI0512-4R7M	4.7	20	130.0	156.0	4.0	3.5	2.5	2.0
HPI0512-100M	10.0	20	272.0	326.0	2.5	2.2	1.8	1.5

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

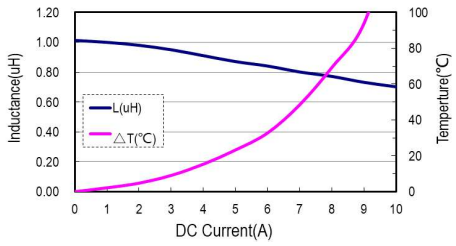
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

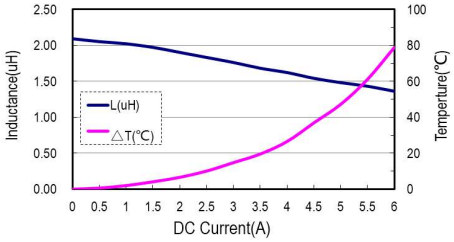
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

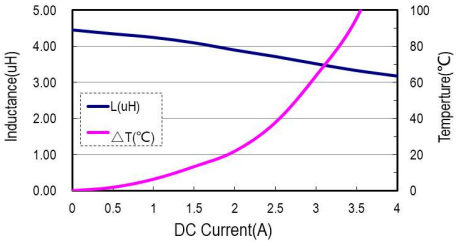
HPI0512-1R0M



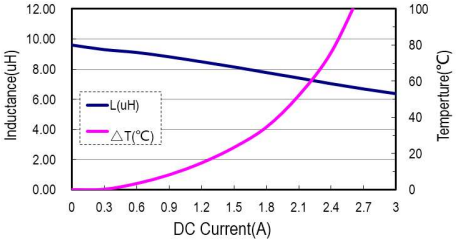
HPI0512-2R2M



HPI0512-4R7M



HPI0512-100M



HPI0515 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0515-R68M	0.68	20	11.6	14.5	15.0	13.0	9.0	8.0
HPI0515-1R0M	1.0	20	18.8	22.6	11.5	9.5	6.6	6.0
HPI0515-1R5M	1.5	20	28.0	34.0	9.5	8.2	5.7	5.0
HPI0515-2R2M	2.2	20	41.4	49.5	7.0	6.0	4.3	3.4
HPI0515-4R7M	4.7	20	80.0	96.0	5.0	4.2	3.0	2.6
HPI0515-100M	10.0	20	149.0	170.0	3.6	3.0	2.4	2.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

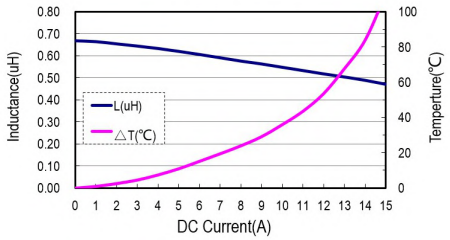
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

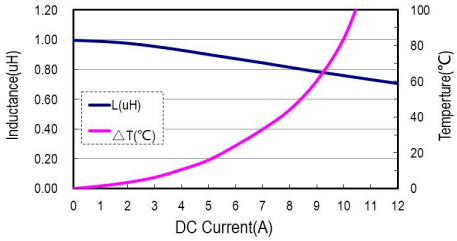
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

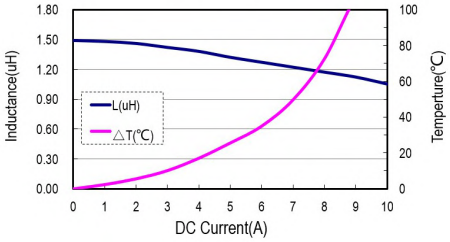
HPI0515-R68M



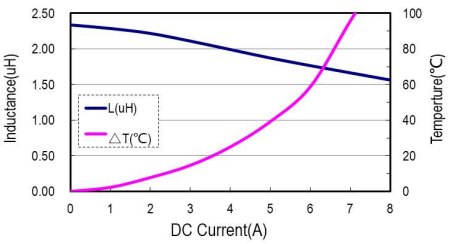
HPI0515-1R0M



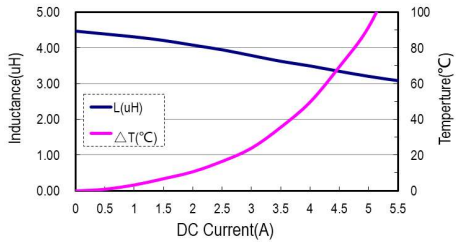
HPI0515-1R5M



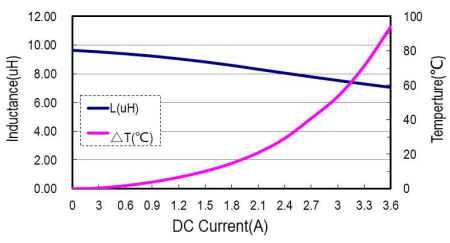
HPI0515-2R2M



HPI0515-4R7M



HPI0515-100M



● HPI0518 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0518-R47M	0.47	20	7.4	8.9	19.0	15.5	10.5	9.5
HPI0518-2R2M	2.2	20	29.2	35.0	8.2	7.4	5.2	4.7
HPI0518-4R7M	4.7	20	61.8	72.8	4.6	4.0	3.5	3.0
HPI0518-6R8M	6.8	20	71.5	86.0	3.6	3.0	3.2	2.8
HPI0518-100M	10.0	20	126.0	149.0	3.4	2.9	2.8	2.4

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

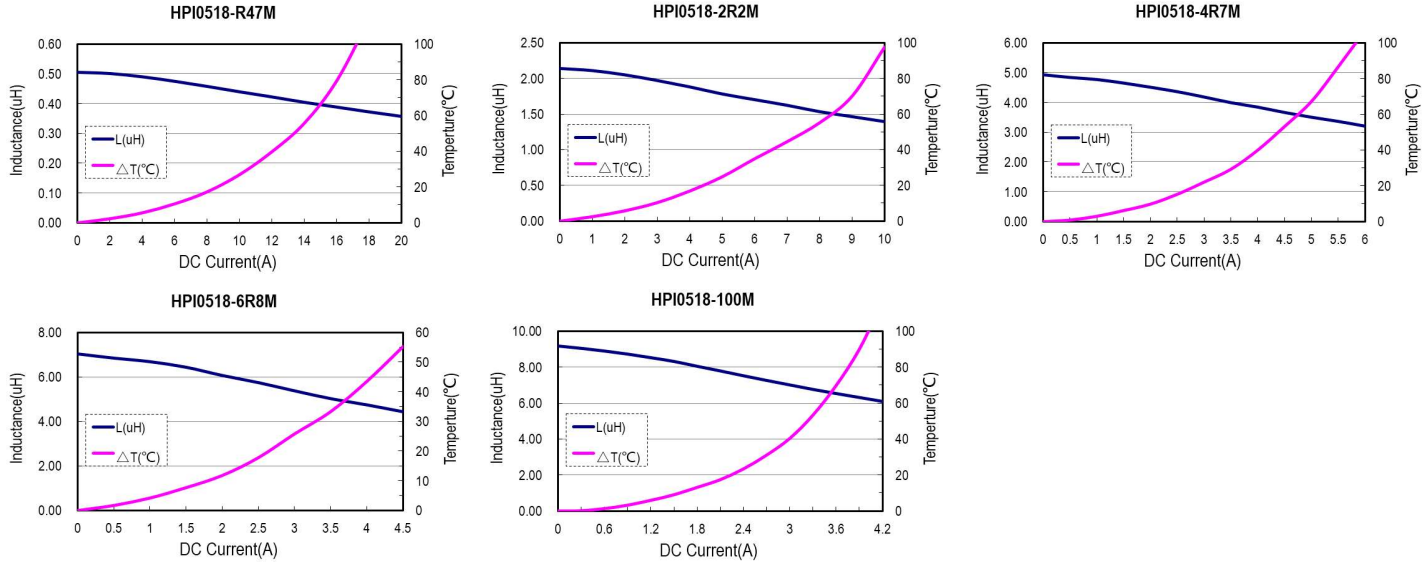
Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

Irms (Max) : DC current（A）that will cause an ΔT of 40℃ 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:



● HPI0502 Series

Part No.	Inductance L (uH)	Tolerance (±%)	DCR(mΩ)		Isat(A)		Irms(A)	
			Typ.	Max.	Typ.	Max.	Typ.	Max.
HPI0502-1R0M	1.0	20	13.7	16.5	13.5	10.6	7.5	6.8
HPI0502-3R3M	3.3	20	49.4	59.3	7.8	6.5	4.2	3.5
HPI0502-4R7M	4.7	20	54.0	65.0	4.8	4.0	4.1	3.2
HPI0502-100M	10.0	20	135.0	162.0	4.0	3.3	2.5	2.0

If you require another part number please contact with us.

Note 1: Referenced ambient temperature 25℃.

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

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

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

Irms (Typ) : DC current（A）that will cause an approximate ΔT of 40℃

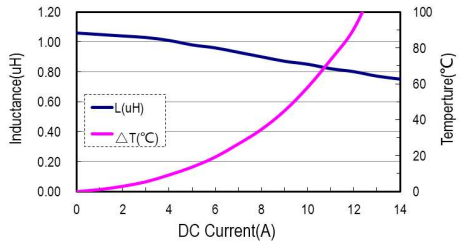
Irms (Max) : DC current（A）that will cause an ΔT of 40℃ Max

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

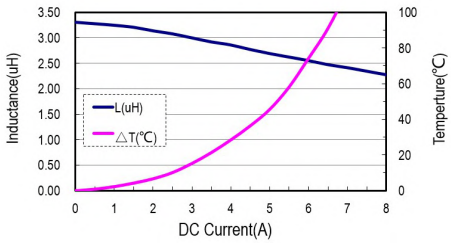
Note 5: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

Typical Performance curves:

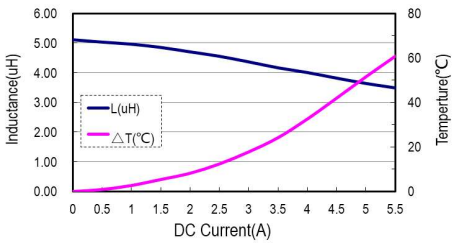
HPI0502-1R0M



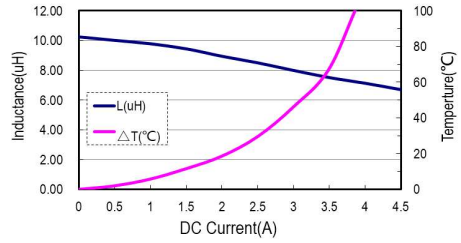
HPI0502-3R3M



HPI0502-4R7M



HPI0502-100M



* 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.