Power Choke Coil MHIB1040 type

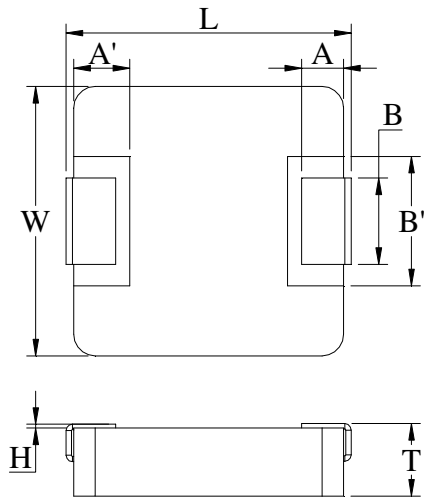
Features

High performance (Isat) realized by metal dust core.
Low profile：Thickness max. 4.0mm
Low loss realized with low DCR
Capable of corresponding high frequency (1MHz)
100% lead (Pb) free meet RoHS standard

Application

DC/DC converter for CPU in Notebook PC
Thin type on-board power supply module for exchanger
VRM for server

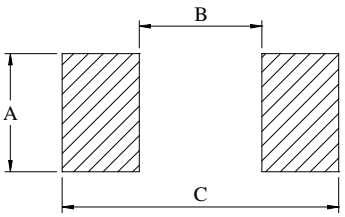
Outline Dimensions



Code	Dimensions (mm)	
	R15 / R22 / R36 / R39 R45 / R47 / R56 / R68 R88 / 1R0 / 1R5	1R8 / 2R0 / 2R2 / 3R3 / 4R7 5R6 / 6R8 / 8R2 / 100 / 150 220 / 330 / 470 / 680
L	11.15 ± 0.35	10.85 ± 0.35
W	10 ± 0.3	
T	3.8 ± 0.2	
A	2.0 ± 0.5	
A’	2.5 ± 0.1	
B	3.0 ± 0.5	
B’	5.0 ± 0.2	
H	0 ~ +0.15	

Recommend Land Pattern Dimensions

The customer shall determine the land dimensions shown below after confirming and safety.



A	4.1
B	5.4
C	13.6

Unit : mm

Specifications

Part Number	L0 Inductance (μH) @ (0A)	R_{dc} (mΩ)		Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
		Typical	Maximum	Typical	Typical
MHIB1040-R15M	0.15	0.5	0.65	40.0	75.0
MHIB1040-R22M	0.22	0.9	1.0	35.0	60.0
MHIB1040-R36M	0.36	1.05	1.2	30.0	50.0
MHIB1040-R39M	0.39	1.1	1.2	31.0	45.0
MHIB1040-R45M	0.45	1.1	1.3	25.0	27.0 Note 5
MHIB1040-R47M	0.47	1.53	1.68	30.0	40.0
MHIB1040-R56M	0.56	1.6	1.8	25.0	33.0
MHIB1040-R68M	0.68	2.1	2.4	23.0	30.0
MHIB1040-R88M	0.88	2.7	3.0	20.0	29.0
MHIB1040-1R0M	1.0	3.0	3.3	18.0	28.0
MHIB1040-1R5M	1.5	3.8	4.2	16.0	32.0
MHIB1040-1R8M	1.8	4.5	5.0	15.0	15.0
MHIB1040-2R0M	2.0	5.2	5.8	14.0	14.0 Note 5
MHIB1040-2R2M	2.2	6.0	7.0	12.0	18.0
MHIB1040-3R3M	3.3	10.8	11.8	10.0	16.0
MHIB1040-4R7M	4.7	17.0	20.0	8.5	15.0
MHIB1040-5R6M	5.6	20.0	23.0	8.0	14.0
MHIB1040-6R8M	6.8	22.5	25.0	7.0	12.0
MHIB1040-8R2M	8.2	25.0	27.0	6.0	9.0
MHIB1040-100M	10.0	27.0	30.0	7.5	8.5
MHIB1040-150M	15.0	40.0	45.0	6.25	7.0
MHIB1040-220M	22.0	60.0	66.0	5.0	5.5
MHIB1040-330M	33.0	85.0	92.0	4.4	5.0
MHIB1040-470M	47.0	130.0	145.0	3.3	3.5
MHIB1040-680M	68.0	178.0	195.0	2.3	3.0

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

**：Inductance Tolerance ± 20%

Note 1.： All test data is referenced to 25℃ ambient.

Note 2.： Test Condition:100KHz, 1.0Vrms

Note 3.： Idc : DC current (A) that will cause an approximate △T of 40℃

Note 4.： Isat : DC current (A) that will cause L0 to drop approximately 30%

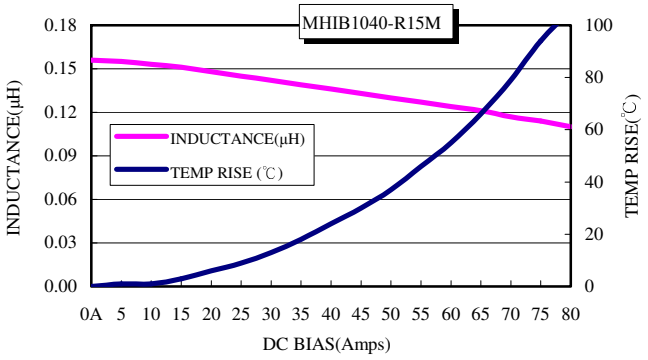
Note 5.： Isat : DC current (A) that will cause L0 to drop approximately 20%

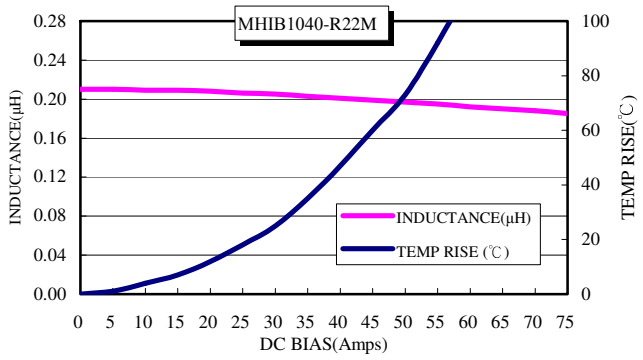
Note 6.： Operating Temperature Range -55℃ to + 125℃

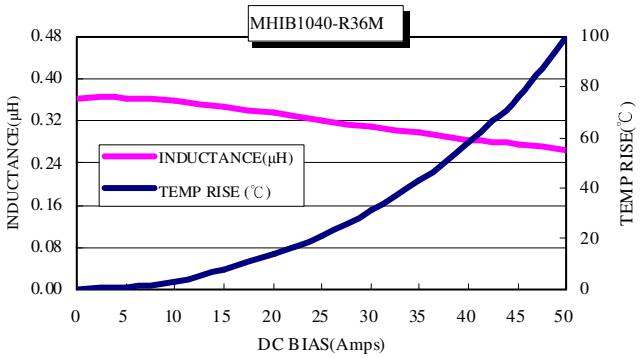
Note 7.： The part temperature (ambient + temp rise) should not exceed 125℃ under the worst case operating conditions. Circuit design , component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

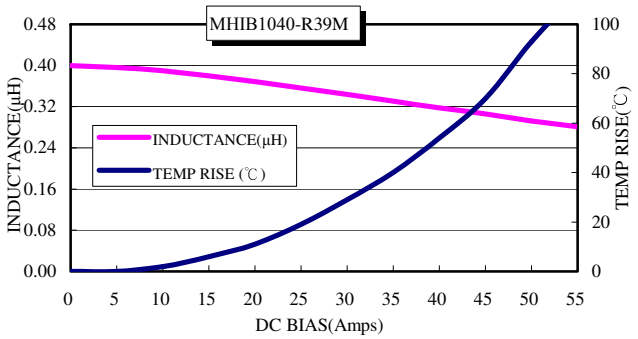
Note 8.： The rated current as listed is either the saturation current or the heating current depending on which value is lower.

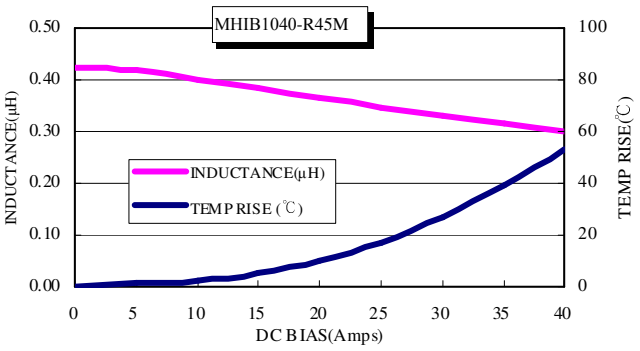
Current Characteristic

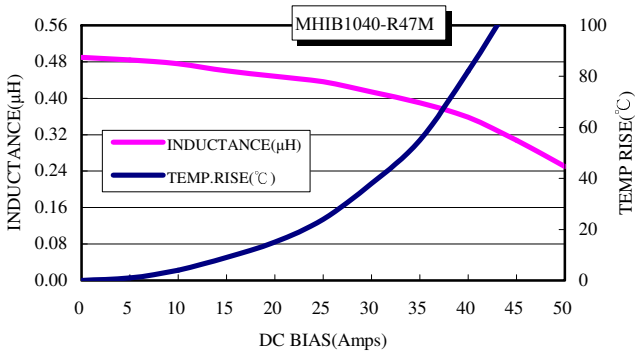


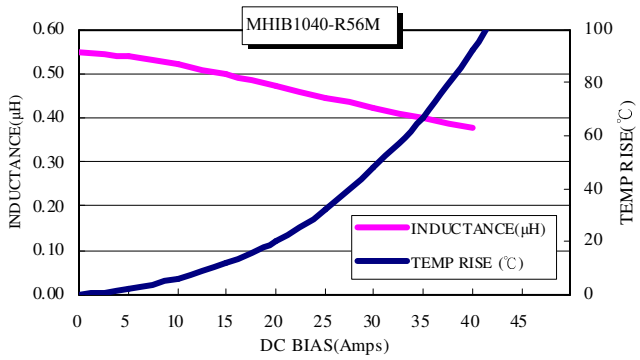


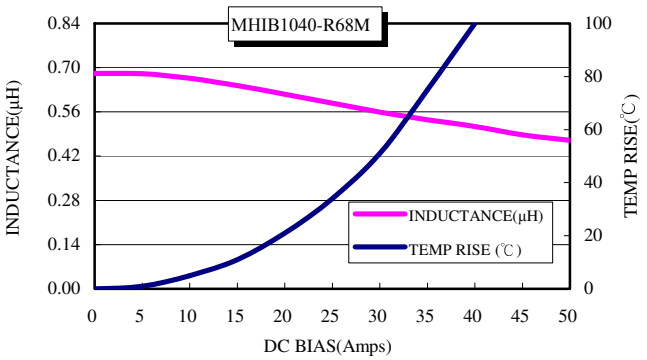


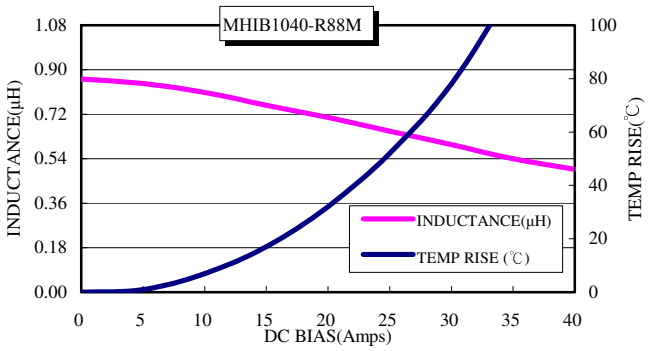


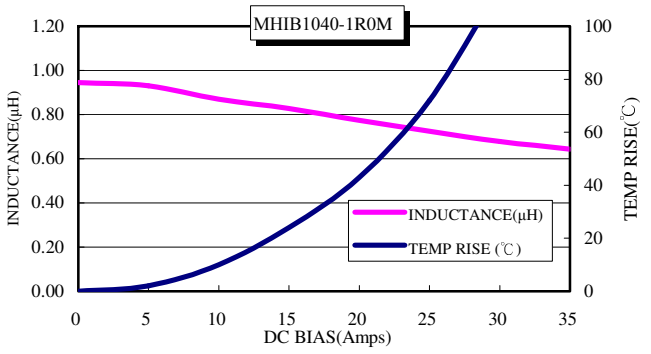









MHIB1040-R88M
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)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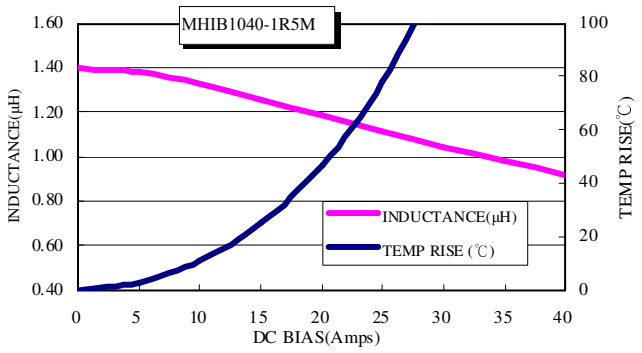
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)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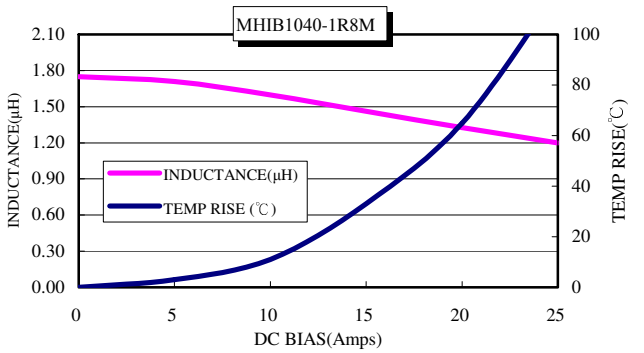
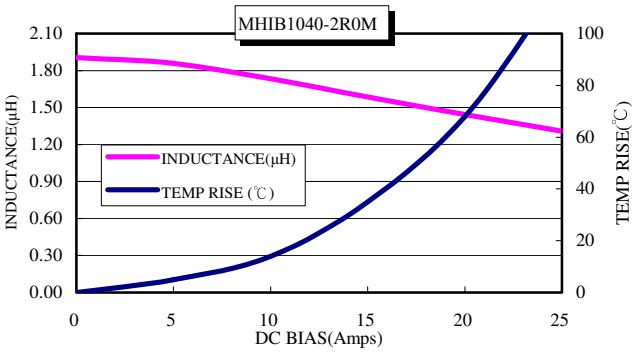
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)


MHIB1040-1R8M
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)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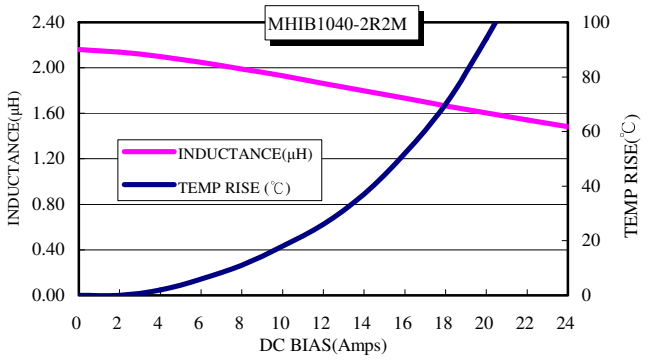
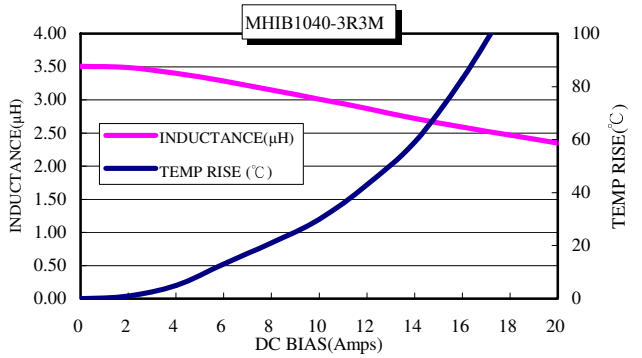
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)


MHIB1040-2R2M
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)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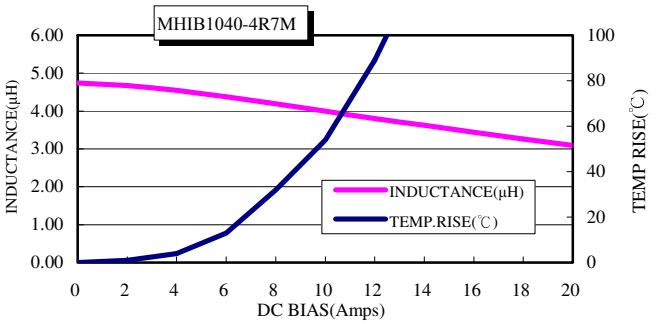
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)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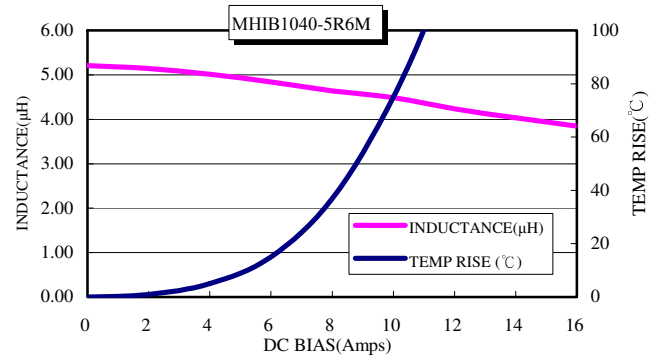
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)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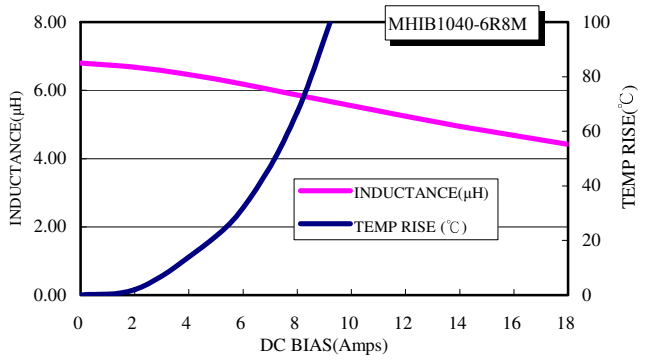
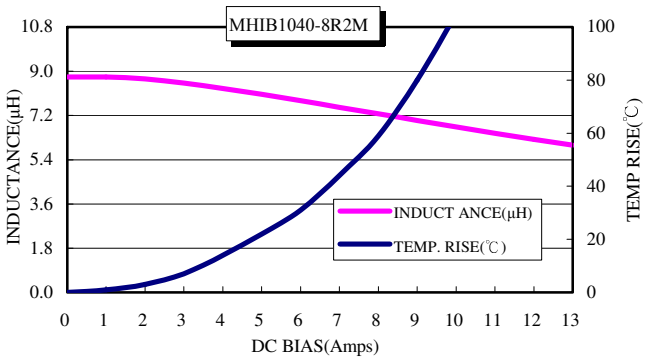
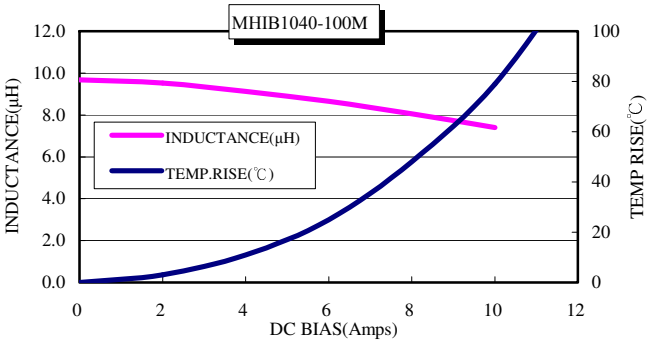
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)


MHIB1040-6R8M
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP RISE (℃)
DC BIAS(Amps)


MHIB1040-8R2M
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCT ANCE(μH)
TEMP. RISE(℃)
DC BIAS(Amps)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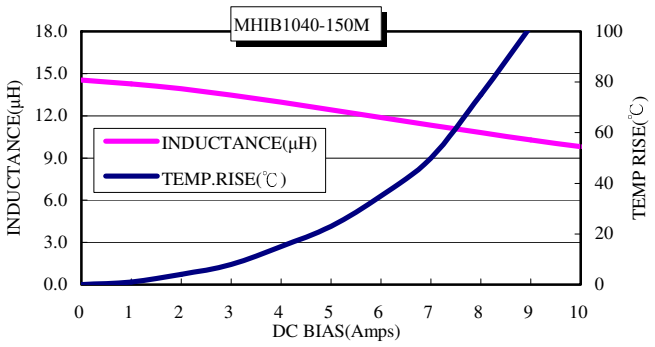
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)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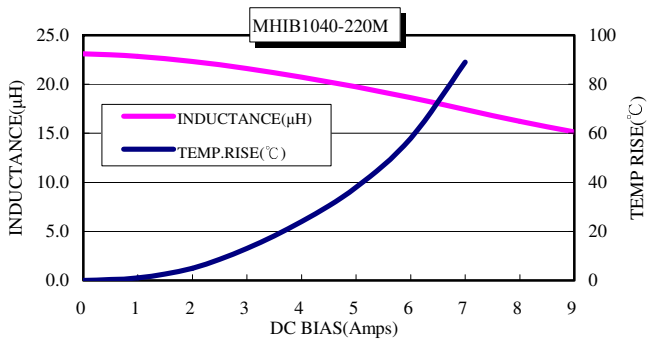
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)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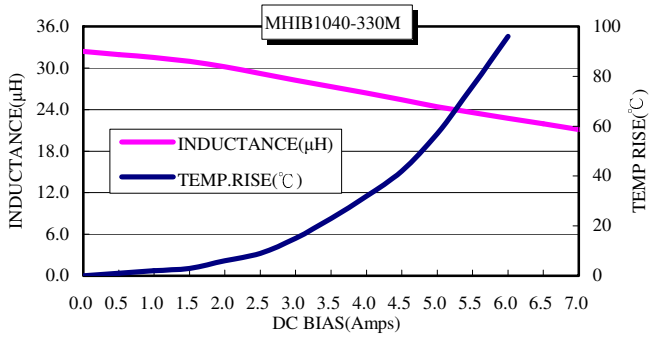
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)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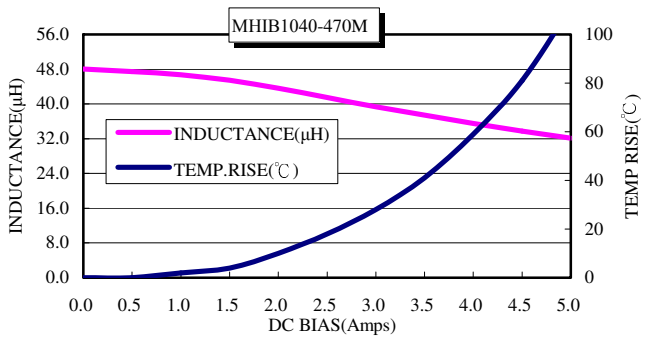
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)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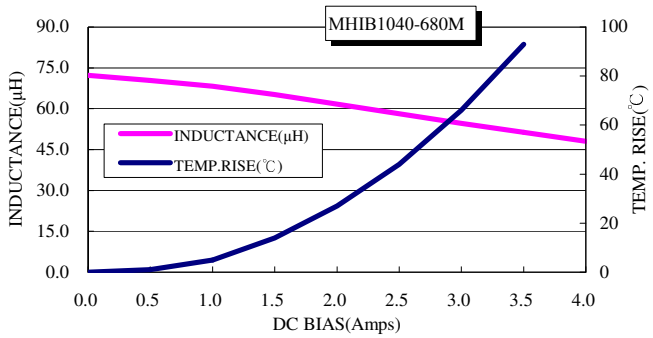
INDUCTANCE(μH)
TEMP RISE(℃)
INDUCTANCE(μH)
TEMP.RISE(℃)
DC BIAS(Amps)


MHIB1040-680M
INDUCTANCE(μH)
TEMP.RISE(℃)
INDUCTANCE(μH)
TEMP. RISE(℃)
DC BIAS(Amps)
90.0
75.0
60.0
45.0
30.0
15.0
0.0
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0