SMD POWER COIL-*JNR 8040H*

PRODUCT IDENTIFICATION

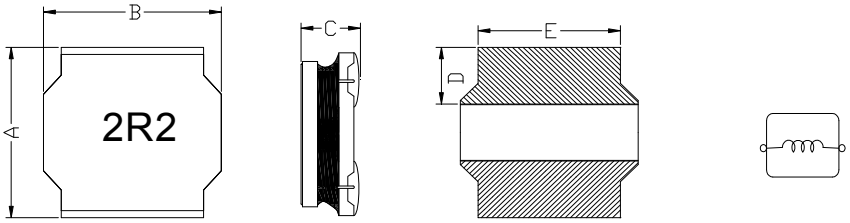
JNR 8040 H – 1R0 N

Type: JNR
Size: 8040
Lead Free: H
Inductance: 1R0
Tol.: N

■ FEATURES

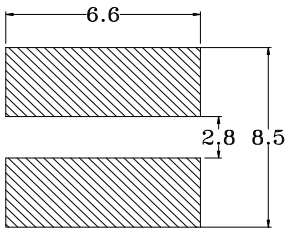
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. Operating temperature :-40~+125℃ (Including self - temperature rise)

■ DIMENSIONS (mm)



Part No.	Inductance	Size (mm) A	B	C	D	E
JNR 8040H	≤10 uH	8.0 ± 0.3	8.0 ± 0.3	4.2 Max	2.4 ± 0.3	6.3 ± 0.3
	>10 uH			3.7 ± 0.3		

Recommended PC Board Pattern



Note:

1.PCB layout is referred to standard IPC-7351B

2. The above PCB layout reference only.

3. Recommend solder paste thickness at 0.15mm and above.

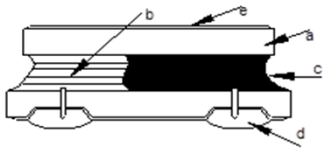
SERIES LIST

No.	Part No.	L (μH)	Tol.	RDC (mΩ) ±20%	Isat (A) typ	Isat (A) max	Irms (A) typ	Irms (A) max
1	JNR 8040H-1R0M	1.00	±20%	8.2	13.80	13.00	8.50	8.00
2	JNR 8040H-1R4M	1.40	±20%	10.0	11.80	11.20	8.20	7.80
3	JNR 8040H-1R5M	1.50	±20%	10.0	11.50	11.00	8.00	7.70
4	JNR 8040H-1R6M	1.60	±20%	10.0	11.50	11.00	8.00	7.70
5	JNR 8040H-1R8M	1.80	±20%	10.5	10.50	10.00	7.70	7.30
6	JNR 8040H-2R0M	2.00	±20%	11.0	10.20	9.60	7.50	7.10
7	JNR 8040H-2R2M	2.20	±20%	11.5	9.80	9.20	7.40	6.90
8	JNR 8040H-2R7M	2.70	±20%	13.0	9.00	8.20	7.00	6.50
9	JNR 8040H-3R3M	3.30	±20%	15.0	8.00	7.50	6.60	6.20
10	JNR 8040H-4R7M	4.70	±20%	19.5	6.70	6.00	5.80	5.30
11	JNR 8040H-5R6M	4.60	±20%	22.0	6.20	5.80	5.40	5.20
12	JNR 8040H-6R8M	6.80	±20%	25.0	5.60	5.10	5.10	5.00
13	JNR 8040H-100M	10.0	±20%	33.0	5.00	4.30	4.60	4.20
14	JNR 8040H-150M	15.0	±20%	50.0	4.00	3.60	3.60	3.20
15	JNR 8040H-220M	22.0	±20%	73.0	3.10	2.80	2.90	2.45
16	JNR 8040H-330M	33.0	±20%	100	2.60	2.10	2.30	2.10
17	JNR 8040H-470M	47.0	±20%	135	2.20	1.90	2.00	1.70
18	JNR 8040H-560M	56.0	±20%	160	1.90	1.60	1.75	1.60
19	JNR 8040H-680M	68.0	±20%	205	1.75	1.50	1.65	1.50
20	JNR 8040H-820M	82.0	±20%	230	1.60	1.40	1.40	1.30
21	JNR 8040H-101M	100	±20%	300	1.45	1.20	1.20	1.10
22	JNR 8040H-121M	120	±20%	350	1.30	1.10	1.10	1.00
23	JNR 8040H-151M	150	±20%	410	1.20	1.03	0.98	0.90
24	JNR 8040H-181M	180	±20%	490	1.04	0.94	0.91	0.83
25	JNR 8040H-221M	220	±20%	610	0.99	0.90	0.85	0.76
26	JNR 8040H-271M	270	±20%	740	0.85	0.80	0.77	0.70
27	JNR 8040H-331M	330	±20%	850	0.75	0.70	0.70	0.66
28	JNR 8040H-471M	470	±20%	1300	0.60	0.55	0.63	0.58
29	JNR 8040H-681M	680	±20%	2200	0.55	0.50	0.60	0.55

Note:

1. Test Frequency : 1MHz /1V
2. All test data referenced to 25℃ ambient
3. Isat：Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Irms：Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40℃
5. The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions. Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Special inquiries besides the above common used types can be met on your requirement.
7. Rated DC current: The lower value of Irms and Isat.

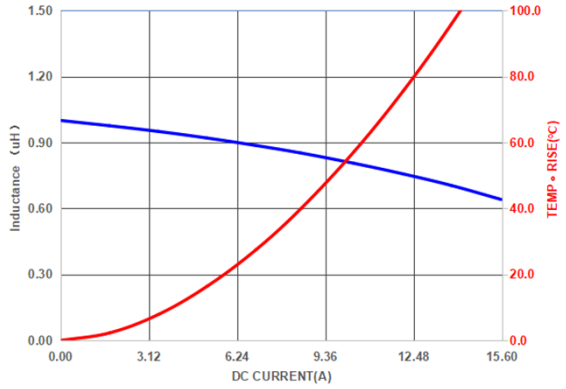
Materials



No.	Description	Specification
a	Core	Ferrite Core
b	Wire	Enameled Copper Wire
c	Glue	Epoxy with magnetic powder
d	Terminal	Ag/Ni/Sn+ Sn Solder
e	Ink	Halogen-free ketone

TYPICAL PERFORMANCE CURVES

JNR 8040H-1R0



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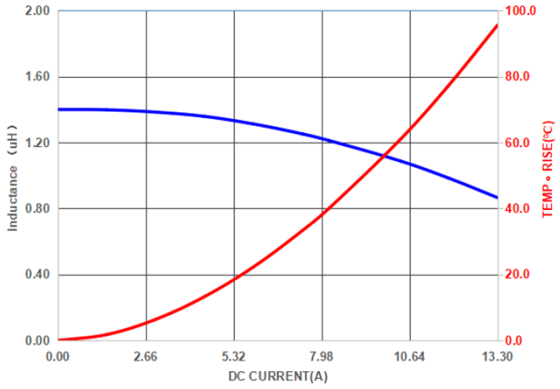

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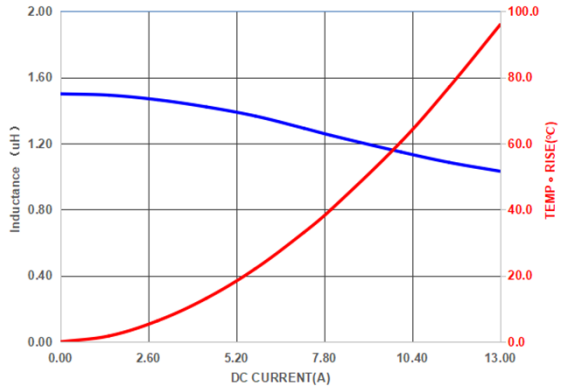

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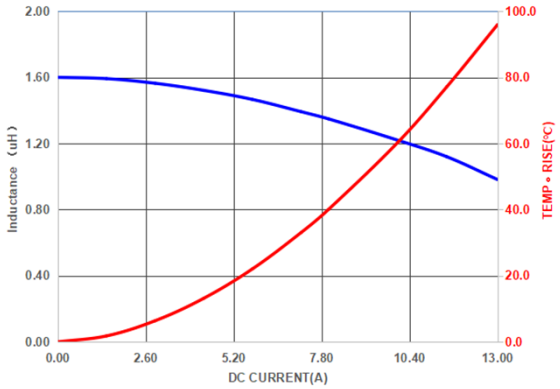

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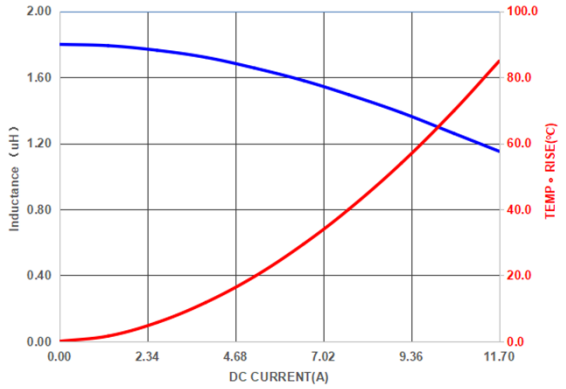

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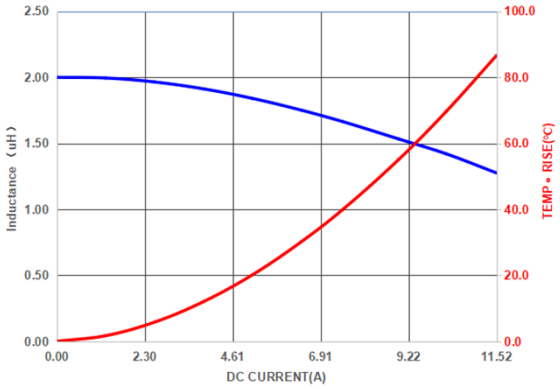

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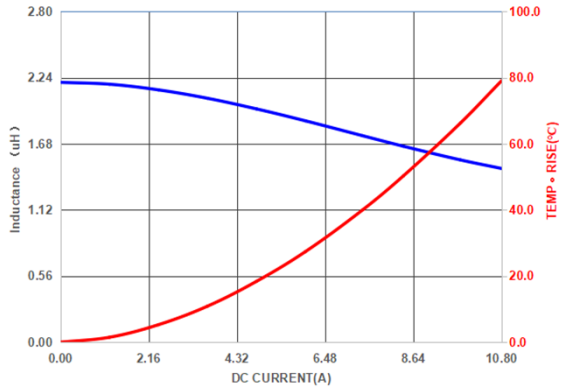

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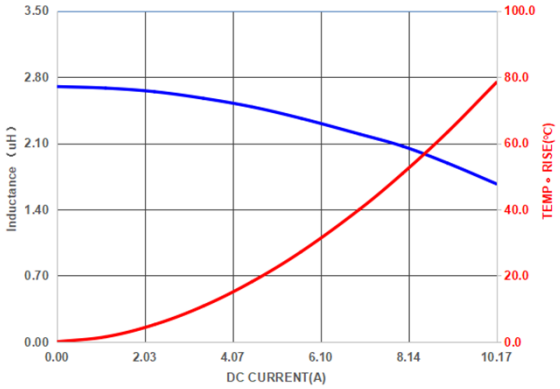

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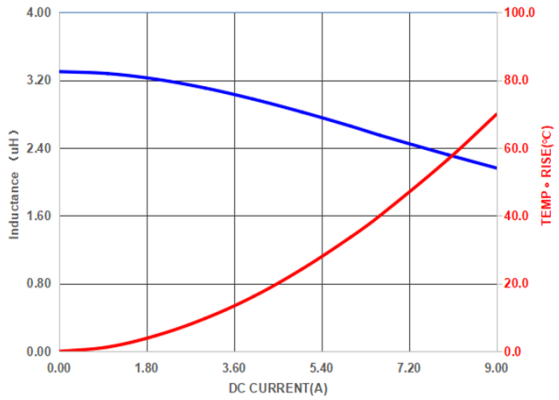

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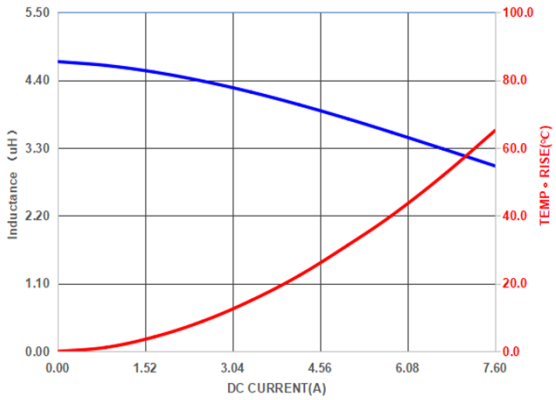

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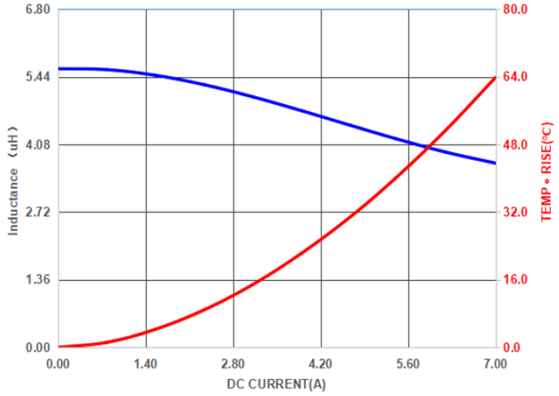

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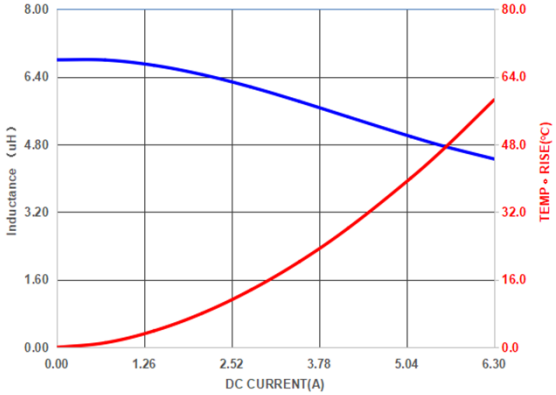

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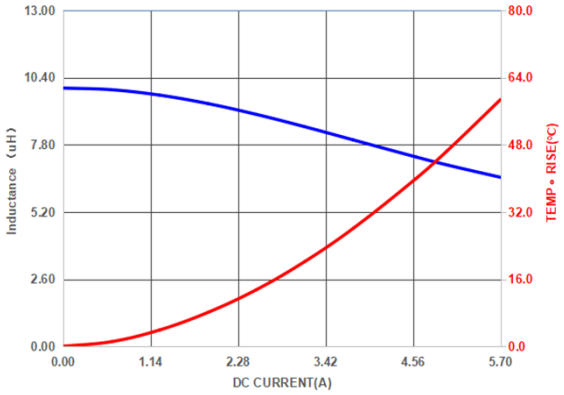

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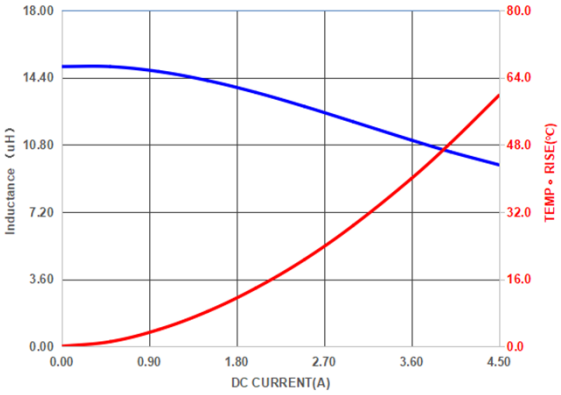

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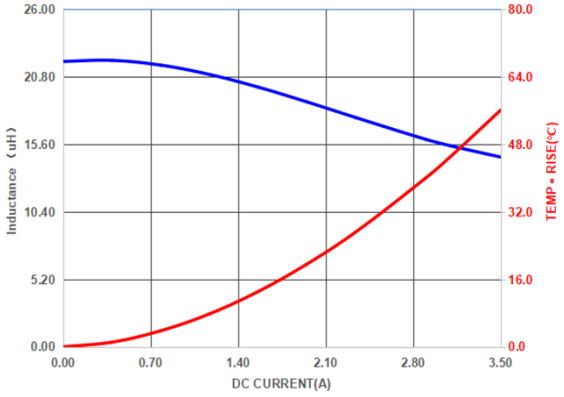

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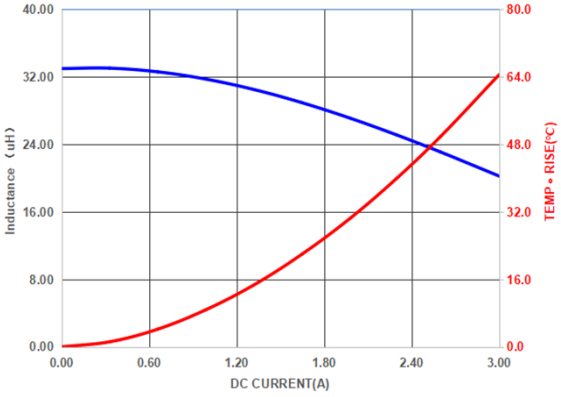

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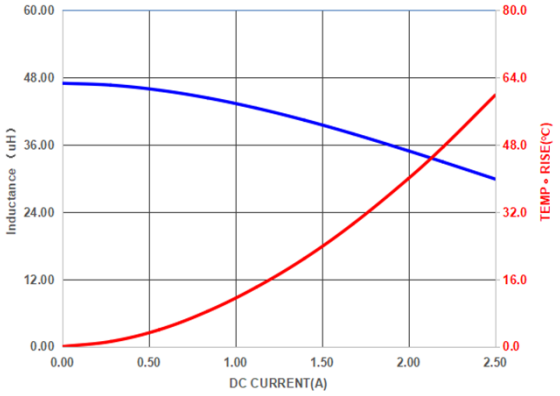

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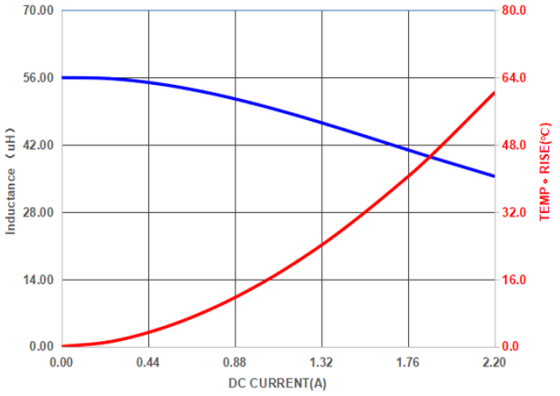

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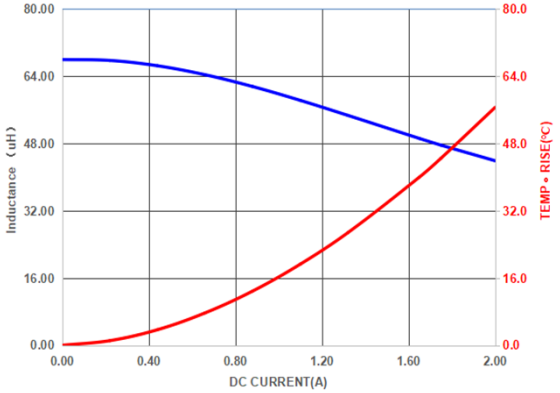

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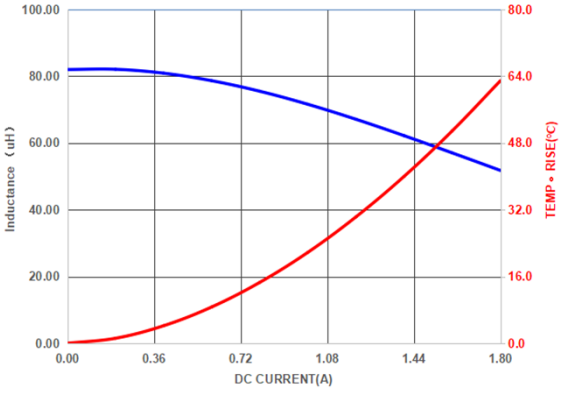

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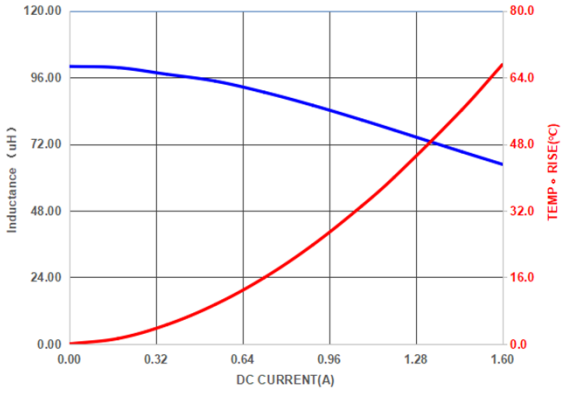

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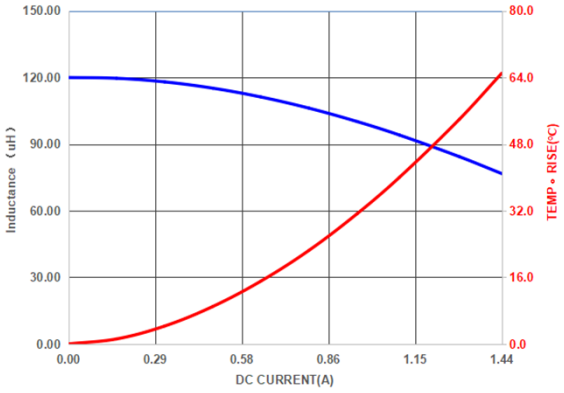

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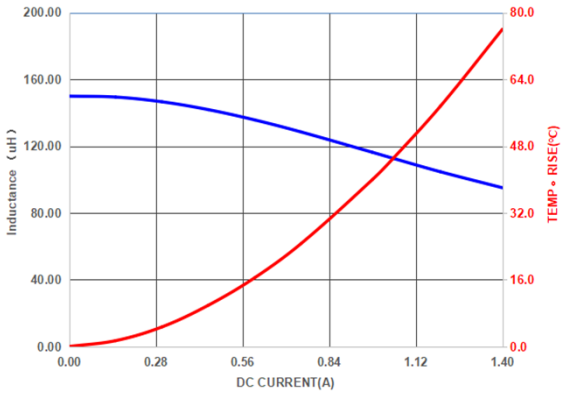

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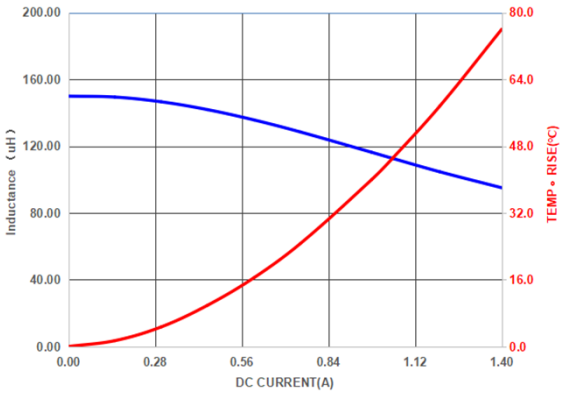

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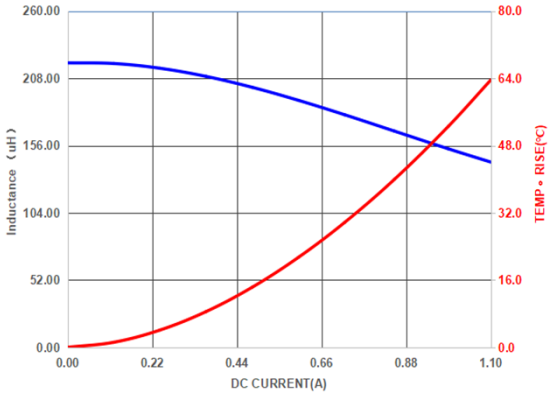

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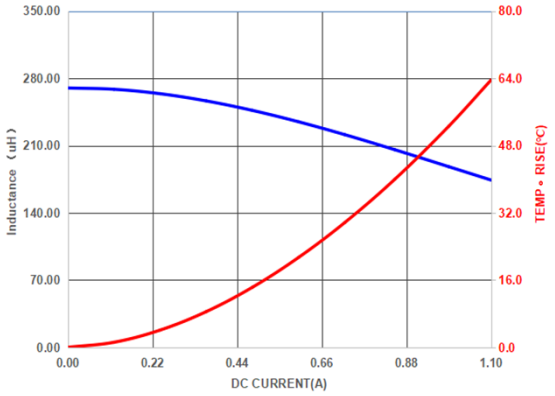

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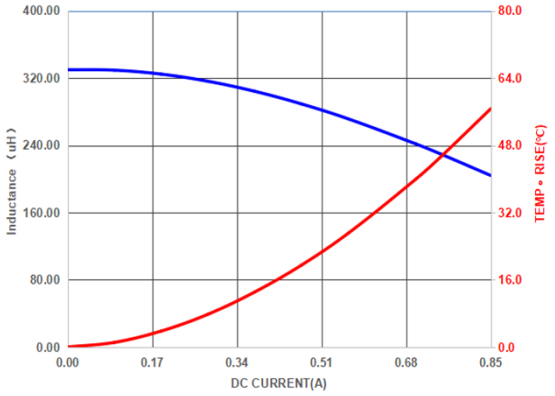

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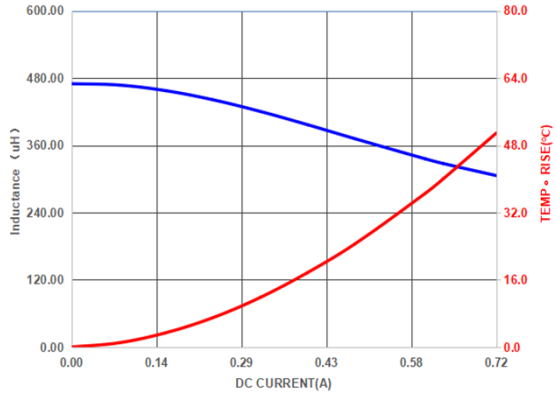

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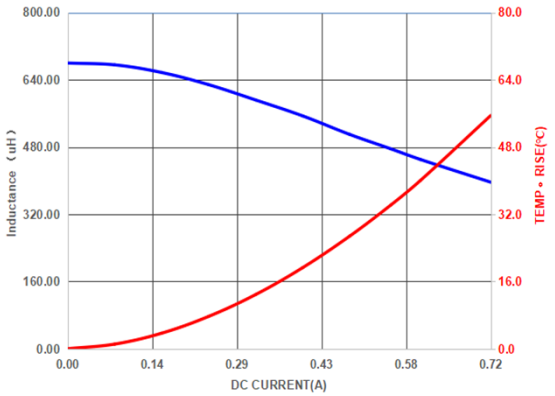
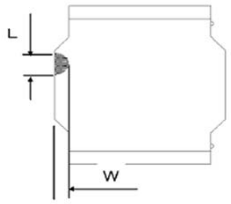


■ Appearance criterion

1、Core chipping

The appearance standard of the chipping size on top side, and bottom side ferrite core is listed below.
Chip off is generated during molding and manufacturing process.
Chip off acceptance limits subjected to the product size.
Our current Defect limit is based on the IPC-A-610.
Some chip off does not impact the product function, see the IPC standard 1 & 2.

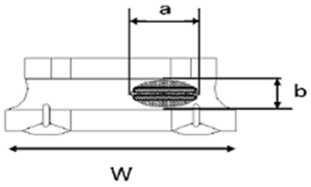


L	≤50 % of the length
W	≤25 % of the width

Defects usually occur at the corners and edges of the product,
There will be a slight defect black and rough, but not exposed copper,
and does not affect the product performance and reliability.

2、Void appearance tolerance Limit

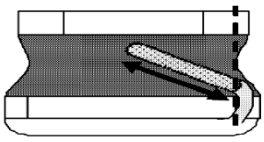
Size of voids occurring to coating resin is specified below.



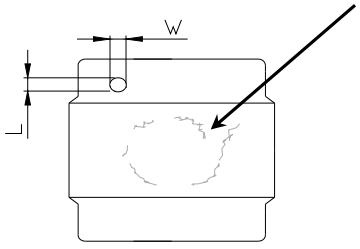
Exposed wire tolerance limit of coating resin part on product side.
Size of exposed wire occurring to coating resin is specified below.
1. Width direction（dimension a）：Acceptable when a≦w/2.
2. Length direction（dimension b）：Dimension b is not specified.
3. The total area of exposed wire occurring to each sides is
not greater than 50% of coating resin area, and is acceptable.

3、External appearance criterion for exposed wire

Exposed winding wire at the secondary side is regarded as qualified product.



4、 Electrode appearance criterion for exposed wire



Visual check on core surface with no crack means pass.

Conforming

Only top side of wire is exposed.
(regardless of whole tope side of wire exposed)

Less than 1/2 of joint side length.
(More than 1/2 is selected as defect)

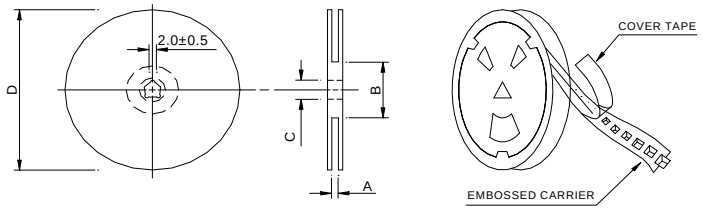
Wire is soldered insufficiently and
less than half of outer diameter is
covered with solder.

L & W
≤20% of the area on one single pad

Foreign materials on the product body is inevitable and accepted.
Electrodes with foreign body (dirt) appearance standards
Foreign materials (dirt) will not affect the coplanarity of PAD,
below the example of foreign materials (dirt) quantity ≤2PCS on single PAD.
Dimensions range as shown in the table.

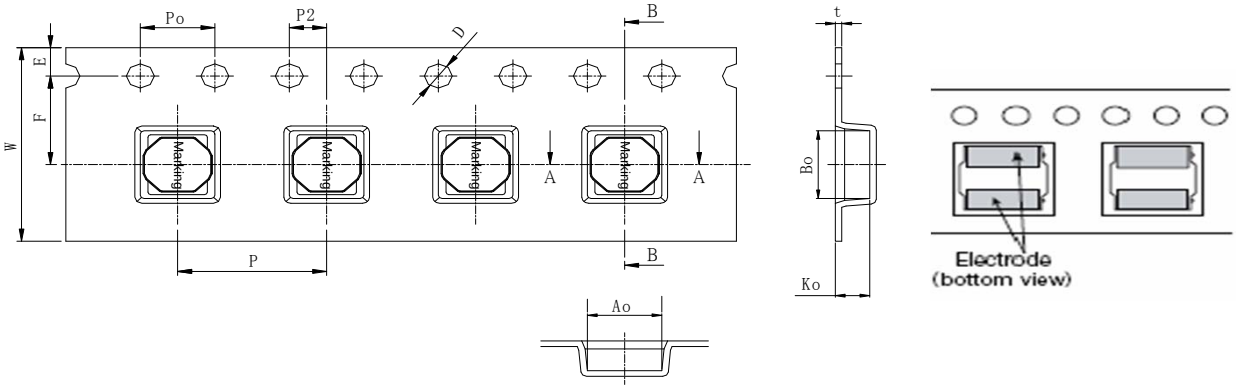
Packaging Information

• Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x16mm	16.4+2/-0	80±2.0	13+0.5/-0.2	330±3.0

• Tape Dimension

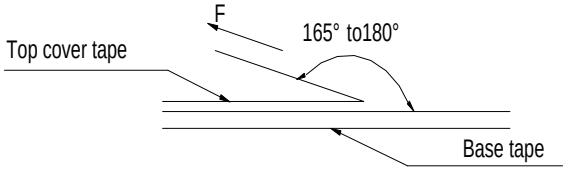


Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	w(mm)	t(mm)	Emm)	F(mm)	D(mm)	Po(mm)	P2(mm)
8.4±0.1	8.4±0.1	4.3±0.1	12±0.1	16±0.3	0.4±0.1	1.75±0.1	7.5±0.1	1.5±0.1	4.0±0.1	2.00±0.1

• Packaging Quantity

Size	Reel
JNR 8040H	1000

• Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI/EIA-481-D-2008 of 4.11 standard).

Tearing Speed mm	Room Temp. (℃)	Room Humidity (%)	Room atm (hPa)
300±10%	5~35	45~85	860~1060

■ Application Notice

・Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

1. Products meet IPC/JEDEC J-STD-020E standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40℃ and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

・Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.