SMD POWER COIL-*JNR 252012F*

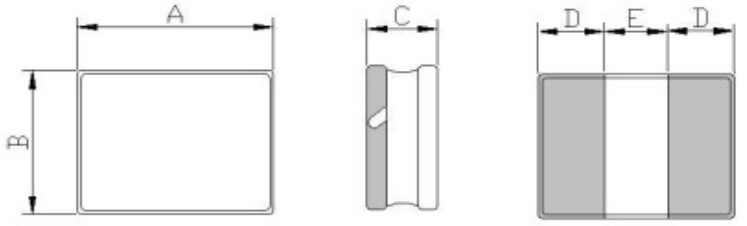
PRODUCT IDENTIFICATION

JNR (Type) 252012 (Size) F (Lead Free) – 2R2 (Inductance) M (Tol.)

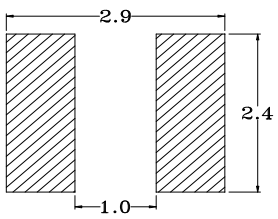
■ FEATURES

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

■ DIMENSIONS (mm)



Recommend PC Board Pattern



Part No.	Size (mm)				
	A	B	C	D	E
JNR 252012F	2.5 -0.1/+0.2	2.0 -0.1/+0.2	1.2 Max	0.75 ref	1.0 ref

SERIES LIST

No.	Part No.	L (μH) ± 20%	RDC (mΩ) Typ.	RDC (mΩ) Max.	Isat (A) Typ.	Isat (A) Max.	Irms (A) Typ.	Irms (A) Max.
1	JNR 252012F-R24M	0.24	0.015	0.019	8.40	7.40	6.00 (1) 7.00 (2)	5.50 (1) 6.00 (2)
2	JNR 252012F-R33M	0.33	0.016	0.021	8.00	7.20	5.50 (1) 6.50 (2)	5.00 (1) 5.50 (2)
3	JNR 252012F-R47M	0.47	0.017	0.023	7.40	6.70	5.00 (1) 6.00 (2)	4.50 (1) 5.00 (2)
4	JNR 252012F-R68M	0.68	0.027	0.032	5.50	4.90	4.30 (1) 5.00 (2)	3.80 (1) 4.50 (2)
5	JNR 252012F-R82M	0.82	0.029	0.035	5.50	4.90	4.30 (1) 4.80 (2)	3.80 (1) 4.30 (2)
6	JNR 252012F-1R0M	1.00	0.034	0.040	5.30	4.70	3.90 (1) 4.50 (2)	3.30 (1) 3.80 (2)
7	JNR 252012F-1R5M	1.50	0.050	0.060	4.50	3.90	3.50 (1) 4.00 (2)	3.00 (1) 3.50 (2)
8	JNR 252012F-2R2M	2.20	0.070	0.084	3.40	3.00	2.60 (1) 3.00 (2)	2.20 (1) 2.60 (2)
9	JNR 252012F-3R3M	3.30	0.085	0.100	1.50	1.30	1.40 (1) 1.60 (2)	1.20 (1) 1.40 (2)
10	JNR 252012F-4R7M	4.70	0.155	0.185	1.30	1.10	1.20 (1) 1.40 (2)	1.00 (1) 1.20 (2)

Note:

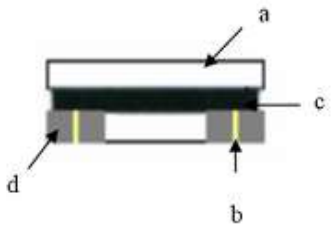
1. Test frequency : 1MHz /1V
2. Isat：Saturation Current (Isat) will cause L0 to drop approximately 30%.
3. Irms：Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40℃.
4. Rated DC current: The lower value of Irms and Isat.

Measurement board data

Irms1
Material : FR4
Board dimensions : 100 X 50 X 1.6t mm
Pattern dimensions: 45 X 30 mm (Double side board)
Pattern thickness : 50 μm

Irms2
Material : FR4
Board dimensions : 100 X 50 X 1.6t mm
Pattern dimensions: 45 X 45 mm (Double side board)
Pattern thickness : 70 μm

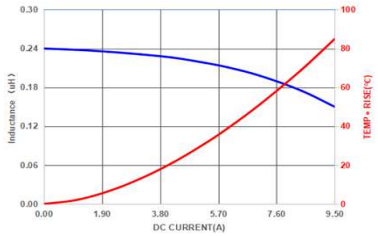
Materials



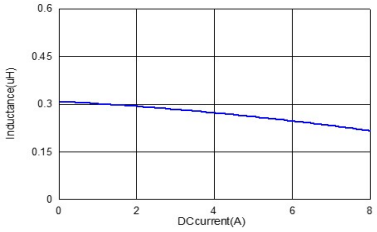
NO	Items	Materials
a	Core	Metal Core
b	Wire	Enameled Copper Wire
c	Glue	Epoxy with magnetic powder
d	Terminal	Ag/Ni/Sn

Typical Performance Curves

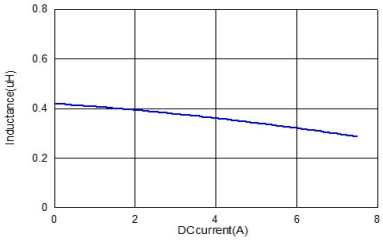
JNR 252012-R24



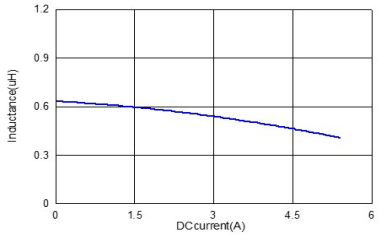
JNR 252012-R33



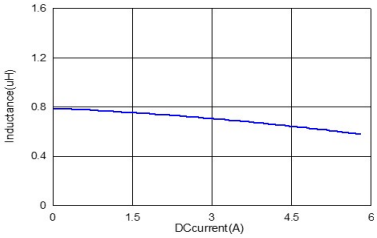
JNR 252012-R47



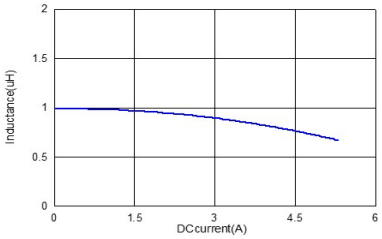
JNR 252012-R68



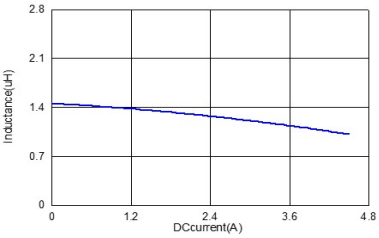
JNR 252012-R82



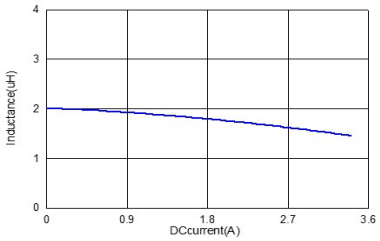
JNR 252012-1R0



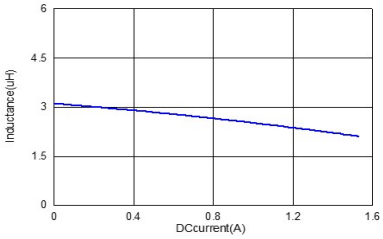
JNR 252012-1R5



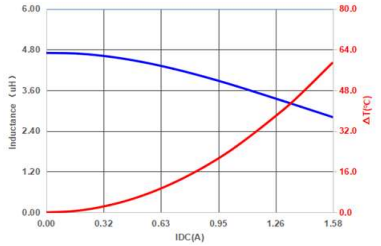
JNR 252012-2R2



JNR 252012-3R3

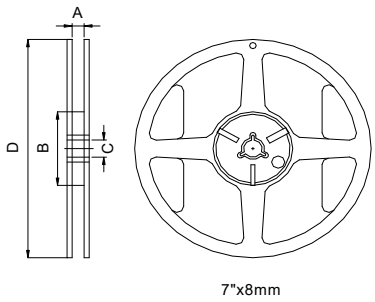


JNR 252012-4R7



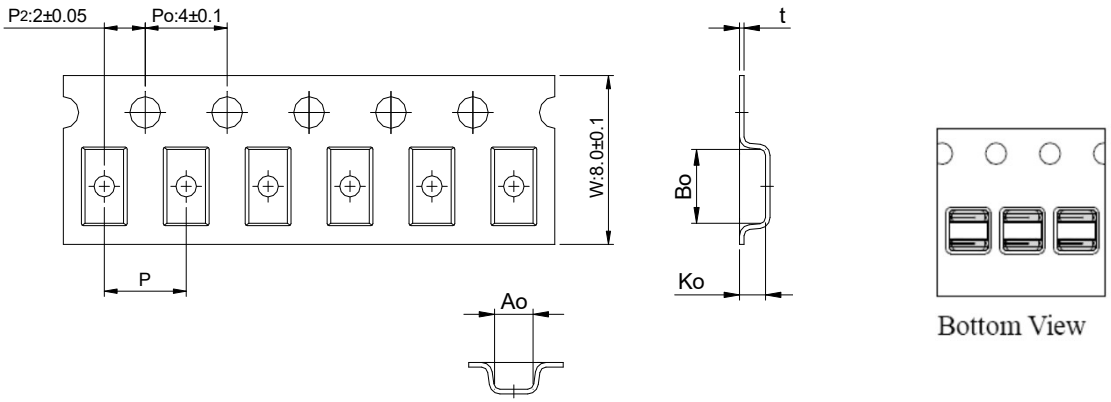
Packaging Information

(1) Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	8.4±1.0	50 min.	13±0.8	178±2

(2) Tape Dimension

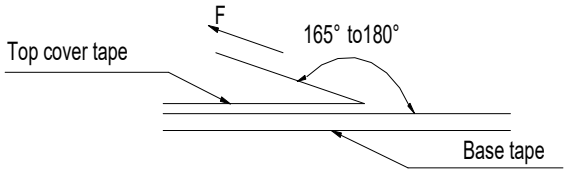


Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	t(mm)
2.45±0.1	3.10±0.1	1.40±0.1	4.0±0.1	0.23±0.05

(3) Packaging Quantity

Size	Reel
JNR 252012F	2000

(4) 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 stadnard)

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

Appearance criterion

1. Core chipping

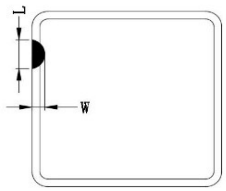
The appearance standard of the chipping size on top side, and bottom side ferrite core is listed below.

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.

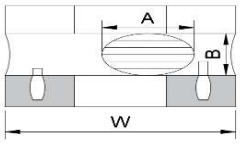


L	≤50 % of the length
W	≤25 % of the width

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.

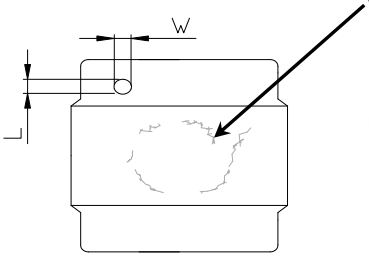
Size of exposed wire occurring to coating resin is specified below.

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.

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

Conforming

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

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

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.