

SMD Power Inductor NR - 4020-Series (Alloy)



Features & Application

2020/1/1

- Metallization on Alloy core results in excellent shock resistance and damage-free durability.
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI).
- Fe base metal material core provides large saturation current.
- Automatic production ensures high quality and consistency.

Notebooks, desktop computers, servers, graphic cards

Blue -ray disc recorders, set top box , Automotive systems.

Portable gaming devices, personal navigation systems, personal multimedia devices

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C /85% relative humidity)
85% relative humidity)



★ When ordering, please check part number

Part Number	Inductance @1MHz,0.25V (uH)	DCR(Ω)		Isat (Max.) (A)		Irms (Max.) (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
ANR4020-R22N18.7A	0.22±30%	0.013	0.011	18.70	22.00	8.20	9.50
ANR4020-R47N13.1A	0.47±30%	0.022	0.018	13.40	15.50	6.40	7.40
ANR4020-R68N8.7A	0.68±30%	0.022	0.018	8.70	11.10	6.40	7.40
ANR4020-1R0M8.7A	1.0±20%	0.026	0.022	8.70	11.10	5.80	6.70
ANR4020-1R5M7.7A	1.5±20%	0.036	0.030	7.70	9.60	5.20	6.00
ANR4020-2R2M6.1A	2.2±20%	0.048	0.040	6.10	7.60	4.30	5.00
ANR4020-3R3M4.7A	3.3±20%	0.072	0.060	4.70	5.90	3.45	4.00
ANR4020-4R7M4A	4.7±20%	0.108	0.090	4.00	4.90	2.85	3.30
ANR4020-6R8M3A	6.8±20%	0.156	0.130	3.00	4.20	2.40	2.80
ANR4020-100M2.8A	10±20%	0.216	0.180	2.80	3.50	2.00	2.35

1. Isat: DC current at which the inductance drops approximate 30% from its value without current;
2. Irms: DC current that causes the temperature rise ($\Delta T = 40^{\circ}\text{C}$) from 25°C ambient;
3. Operating Temperature : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$;
4. Absolute maximum voltage: DC 25V

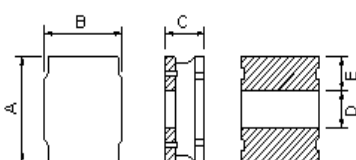


Fig 1

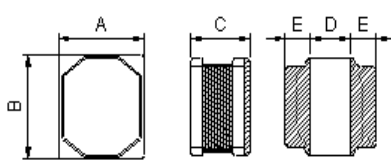
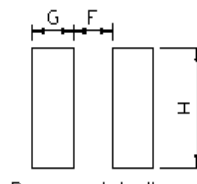


Fig 2



Recommended patterns

Dimensions

A	4.00±0.2
B	4.00±0.2
C	2.00 max
D	1.40±0.3
E	1.30±0.3
F	1.20 typ
G	1.40 typ
H	3.70 typ
Fig 2	
unit : mm	

Impedance/Inductance/Q/	LCR Angilent E4991A
Resistance DC	Chroma 16502
Current per winding that causes a 20°C rise from 25°C ambient	
Electrical specifications at 25°C	

Weight 107 – 154 mg.

Packaging 3000/13 // reel; Plastic tape: 12 mm wide.

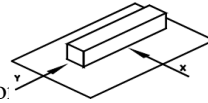
Packaging will different, according to the various chip size.

Contact Us	
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China	sales-cn@bing-ri.com.tw
Japan	sales-jp@bing-ri.com.tw

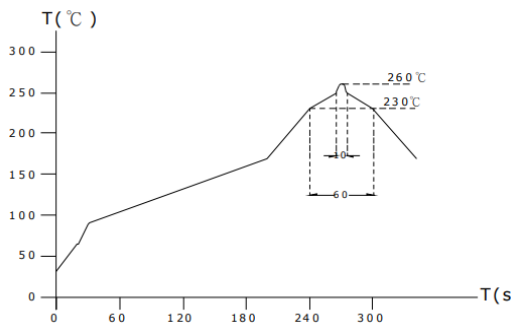
Official Website :
https://www.bing-ri.com.tw/

GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO $+125^{\circ}\text{C}$ (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y withstanding at below conditions.
Terminal should not peel off. (refer to figure at right) 0.5kg Min —4020
4. Insulating resistance: Over $100\text{M}\Omega$ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/(^{\circ}\text{C } -25\sim +80)$. $^{\circ}\text{C}$, inductance deviation within $\pm 5.0\%$, after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in $90\sim 95\%$ relative humidity at 40 ± 2 and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration ($10\sim 55\sim 10$ Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, in three different
10. Resistance to Soldering Heat: 260 , 10 seconds(See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range: $10 \sim 35$ (Generally: $21 \sim 31$) , Humidity Range: $50\% \sim 80\%$ RH (Generally: $65\% \sim 75\%$) ; Transportation condition: Temperature Range: $-35 \sim 85$, Humidity Range: $50\% \sim 95\%$ RH
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead-free heat en duran ce test



Lead-free the recommended reflow condition

