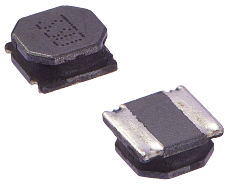
NRSA Series

SMD Power Inductors For Automotive

Size 6020



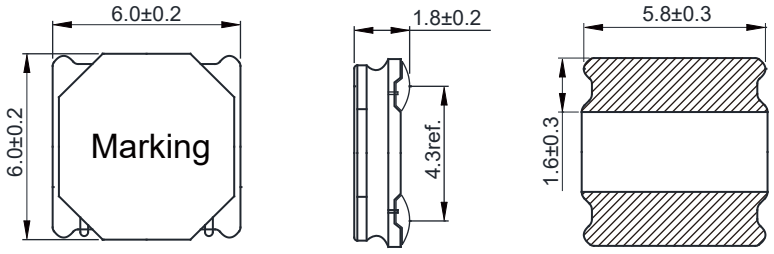
FEATURES

- Magnetic shield type wound inductor for power circuits using a ferrite magnetic material
- High magnetic shield construction and compatible with high-density mounting.
- Larger current and lower Rdc were achieved by optimizing the ferrite core figure.
- Operating temperature: –55 to +125°C(including self-temperature rise)
- AEC-Q200 qualified
- Quantity: 2000pcs

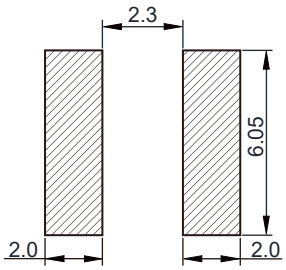
APPLICATION

- Car navigation, car stereo and car accessories only

Dimensions: [mm]



Land Pattern: [mm]



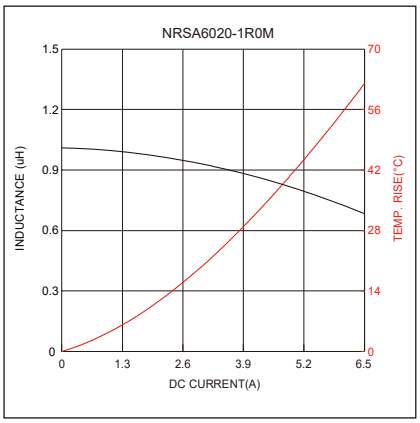
Electrical Properties:

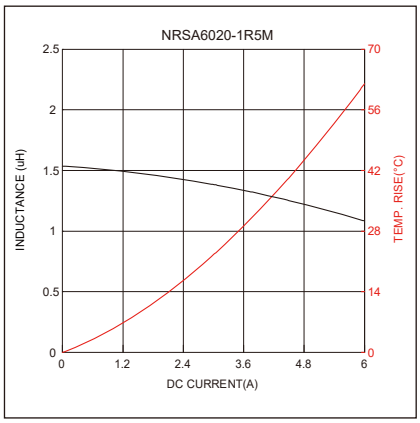
Part No	Inductance @100KHz/1V (μH)	Tolerance	Saturation Current Typ. (A)	Temperature Rise Current Typ. (A)	DC Resistance ±20% (mΩ)	SRF Min. (MHZ)
NRSA6020-1R0M	1.0	±20%	6.20	4.50	19.0	86
NRSA6020-1R5M	1.5	±20%	5.50	3.80	22.5	72
NRSA6020-2R0M	2.0	±20%	5.30	3.65	25.0	71
NRSA6020-2R2M	2.2	±20%	5.00	3.50	29.0	62
NRSA6020-3R3M	3.3	±20%	4.00	3.30	35.0	45
NRSA6020-4R7M	4.7	±20%	3.00	2.80	54.0	35
NRSA6020-5R6M	5.6	±20%	2.70	2.60	59.0	32
NRSA6020-6R8M	6.8	±20%	2.60	2.50	78.0	25
NRSA6020-8R2M	8.2	±20%	2.40	2.30	103	24
NRSA6020-100M	10	±20%	2.10	2.10	106	18
NRSA6020-150M	15	±20%	1.50	1.60	138	15
NRSA6020-220M	22	±20%	1.30	1.40	204	12
NRSA6020-470M	47	±20%	0.82	0.75	520	8

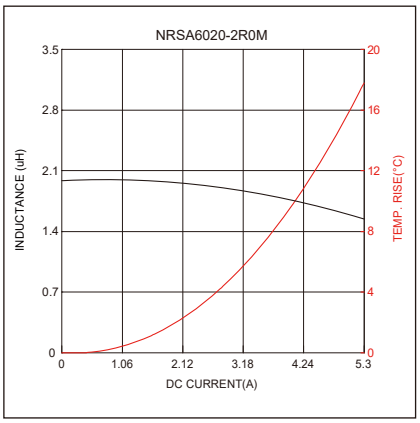
I_R will cause the coil temperature rise approximately Δt40℃

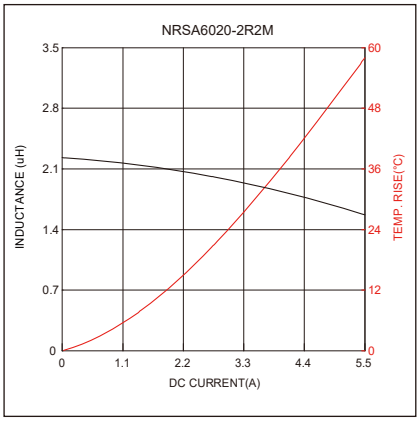
I_{SAT} will cause L to drop approximately 30% .

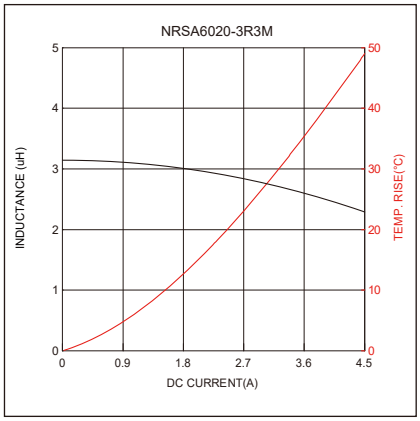
Typical Electrical Characteristics:

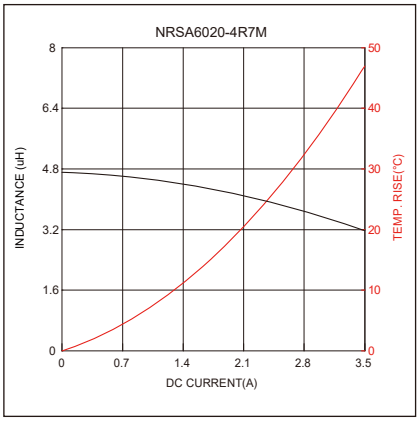


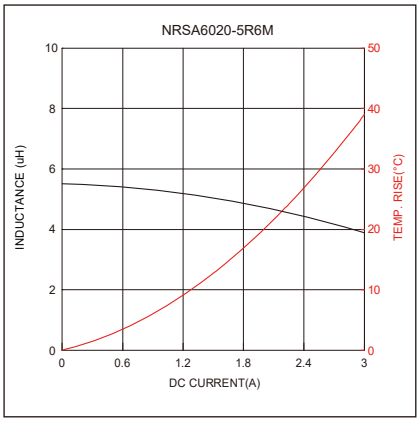


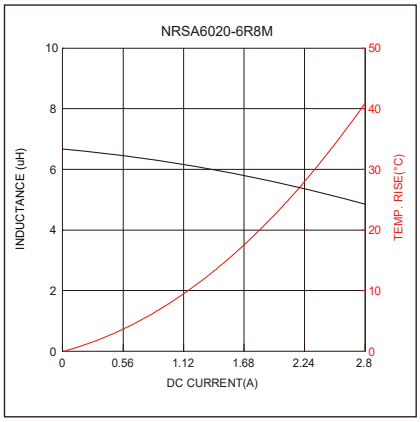


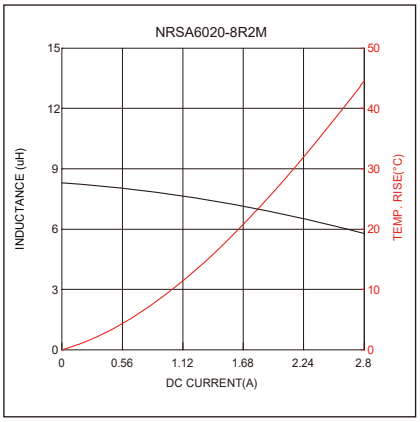


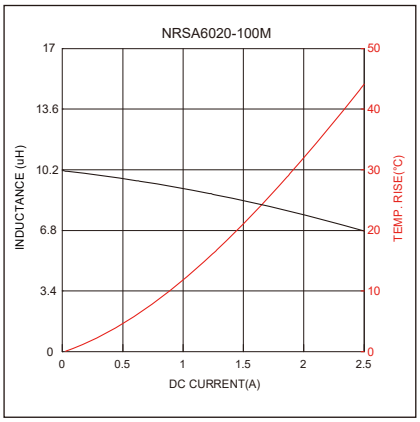


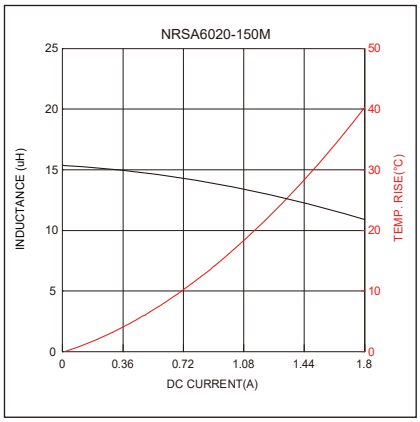


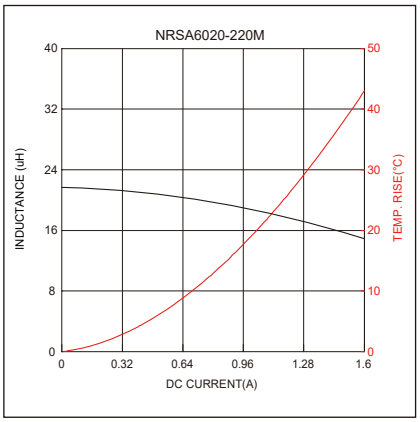


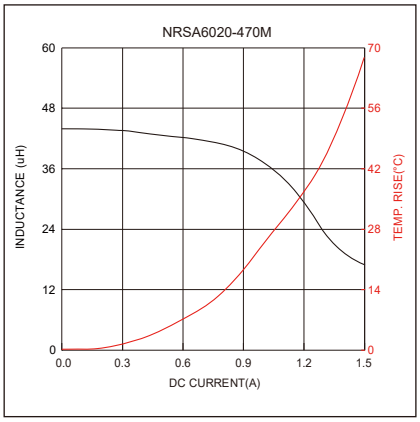




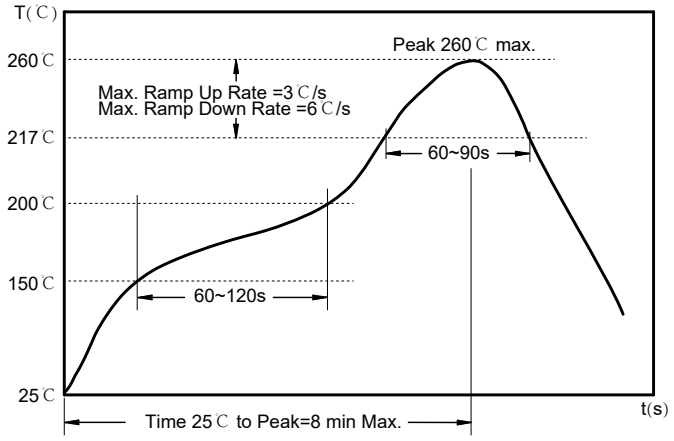







NRSA6020-470M
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
60
48
36
24
12
0
70
56
42
28
14
0
0.0
0.3
0.6
0.9
1.2
1.5

Soldering Reflow:



Preheat condition: 150 ~200℃/ 60~120 sec.

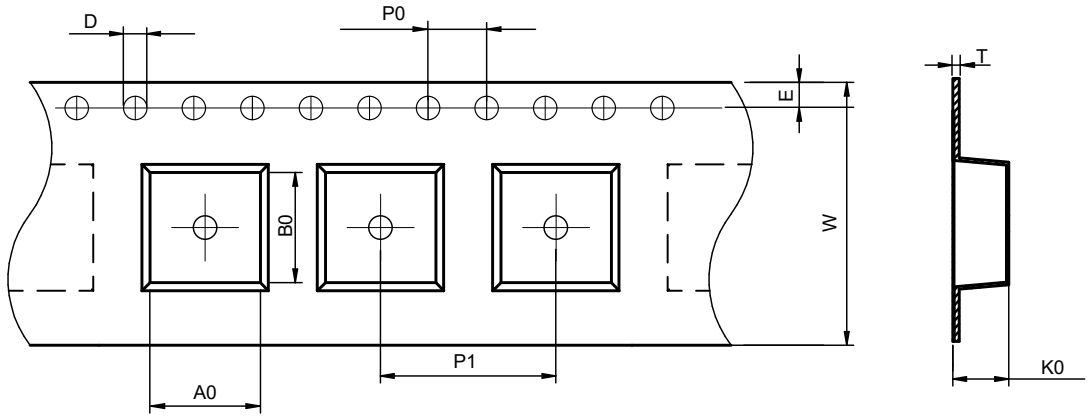
Allowed time above 217℃: 60~90 sec.

Max temperature: 260℃.

Allowed Reflow time: 2x max.

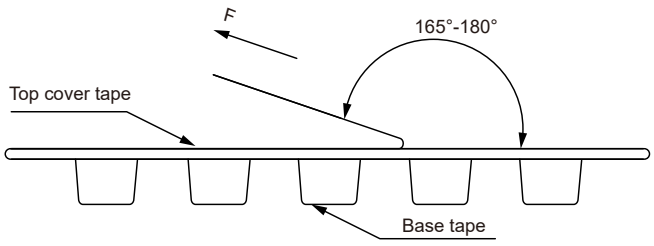
Packaging Information:

Tape Dimension:



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
NRSA6020	6.4±0.1	6.4±0.1	1.5±0.1	4.0±0.1	12.0±0.1	16.0±0.3	2.3±0.1	1.75±0.1	0.35±0.05

Peel force of top cover tape:

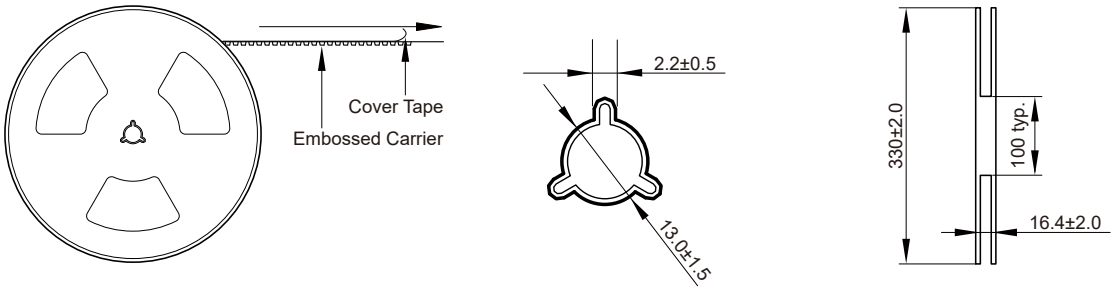


The peel force of top cover tape shall be between 0.3 to 1.17 N

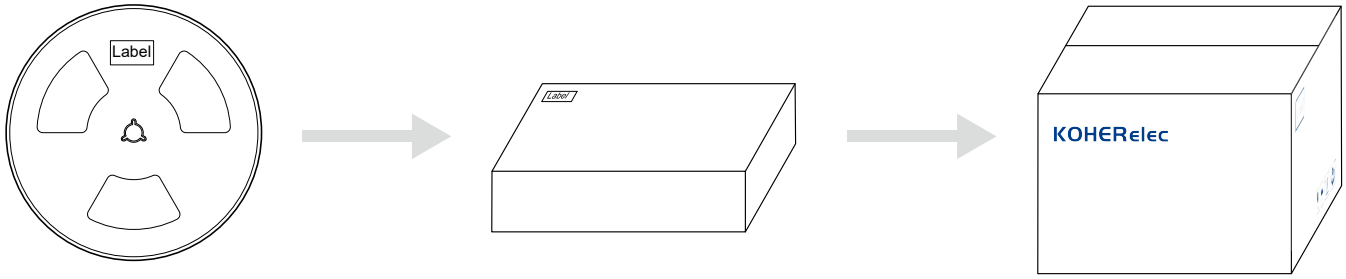
Product Marking:

Marking	Printing (Inductance)

Reel Dimension：[mm]



Packaging Quantity:



2000 Pcs/Reel

2 Reel /Inner box(4K Pcs)

3 Inner box/Carton box(12K Pcs)

Cautions and Warnings:

Storage Conditions：

- The storage period is within 12 months after the completion of production. Be sure to follow the storage conditions (temperature: -5 to 35°C, humidity: 75% RH Max).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.The warranty period is one year.
- Product should not be exposed to environment with high temperature, high humidity, dust, corrosive gas and etc.
- Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- Please always handle products carefully to prevent any damage caused by dropping down or inappropriate removing.

Operation Instructions:

- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Before soldering, be sure to preheat components.The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- Generally, Koher might not be familiar with either customer's specific application or actual requests as customer does.As a result customer shall be responsible for checking and confirming whether Koher product with the performance described in the product specification is suitable for using in customer's particular application or not.