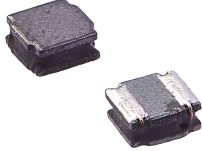


NRSA Series

SMD Power Inductors For Automotive

Size 3012B



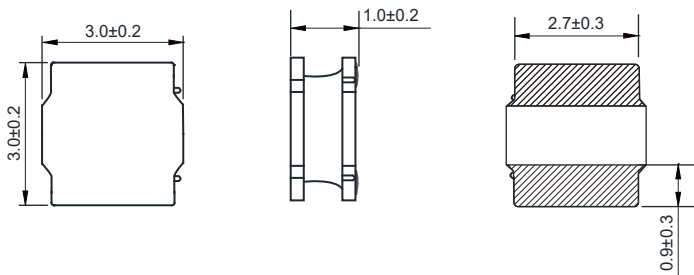
FEATURES

- 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

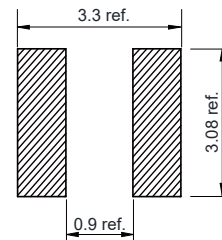
APPLICATION

- Car navigation, car stereo and car accessories only

Dimensions: [mm]



Land Pattern: [mm]



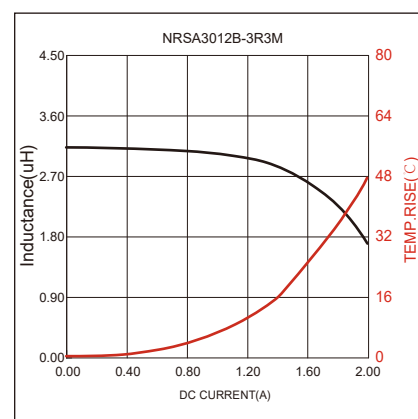
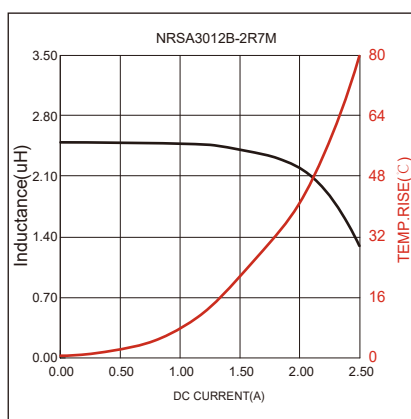
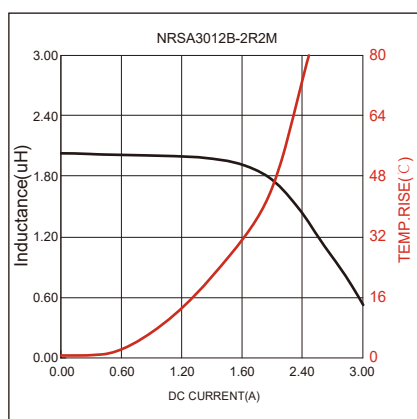
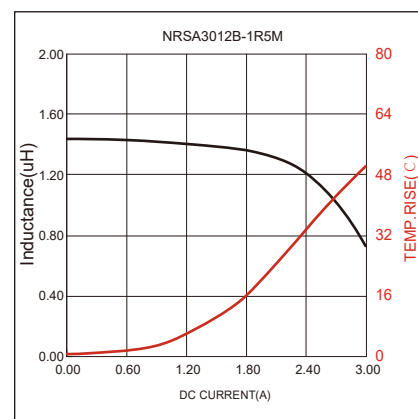
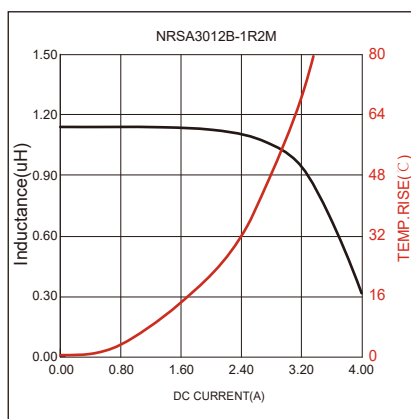
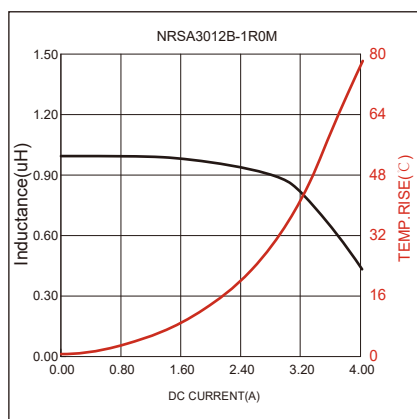
Electrical Properties:

Part No	Inductance @ 100KHz/1V (μH)	Tolerance	Temperature Rise Current Typ. (A)	Temperature Rise Current Max. (A)	Saturation Current Typ. (A)	Saturation Current Max. (A)	DC Resistance ±20% (mΩ)
NRSA3012B-1R0M	1.00	±20%	2.80	2.60	3.60	3.30	43
NRSA3012B-1R2M	1.20	±20%	2.60	2.40	3.30	3.00	60
NRSA3012B-1R5M	1.50	±20%	2.60	2.30	2.60	2.30	60
NRSA3012B-2R2M	2.20	±20%	2.20	1.80	2.40	2.10	100
NRSA3012B-2R7M	2.70	±20%	1.80	1.60	2.10	1.90	112
NRSA3012B-3R3M	3.30	±20%	1.70	1.50	1.60	1.45	115

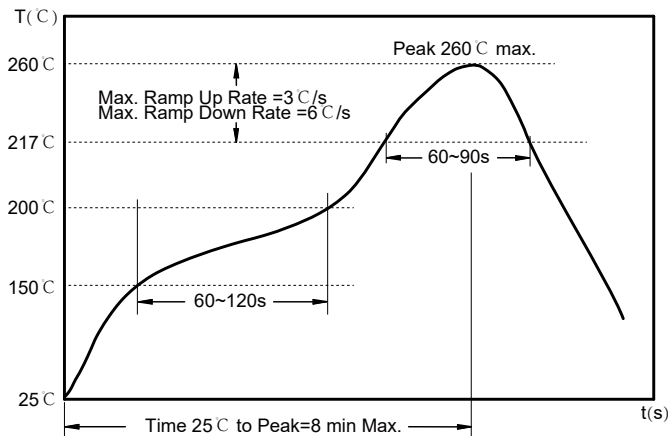
Saturation Current will cause L to drop approximately 30%

Temperature Rise Current: The actual value of DC current when the temperature rise is $\Delta T=40^{\circ}\text{C}$

Typical Electrical Characteristics:



Soldering Reflow:



Preheat condition: 150 ~200 $^{\circ}\text{C}$ / 60~120 sec.

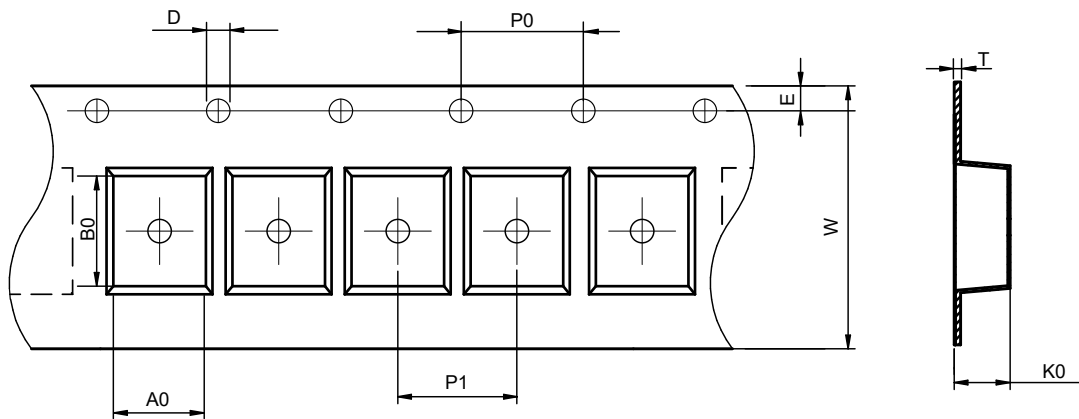
Allowed time above 217 $^{\circ}\text{C}$: 60~90 sec.

Max temperature: 260 $^{\circ}\text{C}$.

Allowed Reflow time: 2x max.

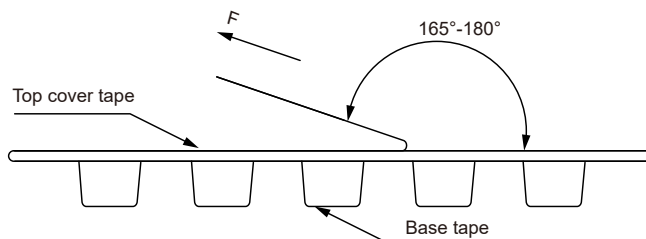
Packaging Information:

Tape Dimension :



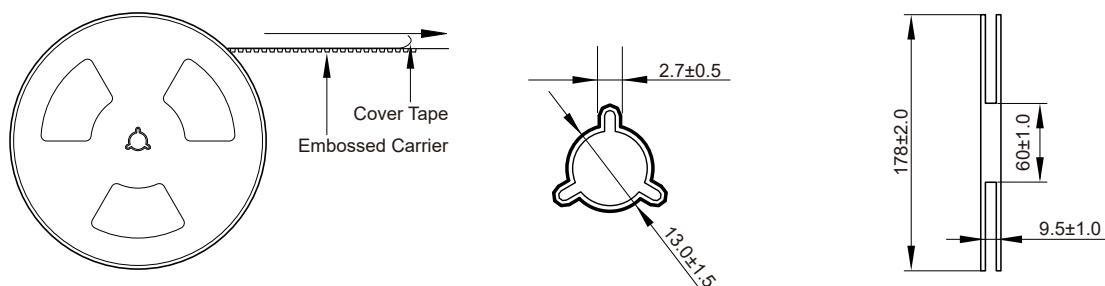
Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
NRSA3012B	3.3 ± 0.1	3.3 ± 0.1	1.5 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	8.0 ± 0.1	1.4 ± 0.1	1.75 ± 0.1	0.23 ± 0.05

Peel force of top cover tape:

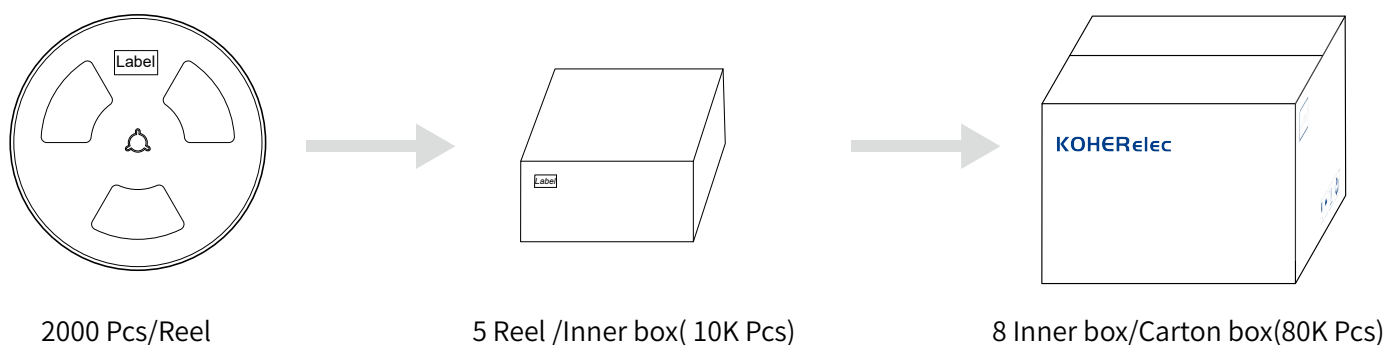


The peel force of top cover tape shall be between 0.3 to 1.17 N

Reel Dimension: [mm]



Packaging Quantity:



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.