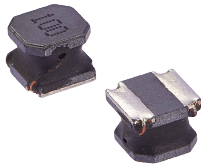


NRSA Series
SMD Power Inductors for Automotive
Size 5040



FEATURES

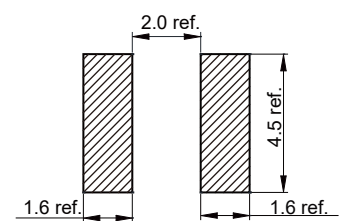
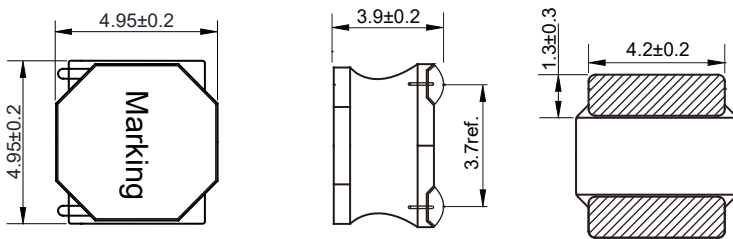
- Magnetic shield type wound inductor for power circuits using a ferrite magnetic material
- High magnetic shield construction and compatible with high-density mounting.
- Larger current and lower Rdc were achieved by optimizing the ferrite core figure.
- Operating temperature: -55 to +125°C(including self-temperature rise)
- AEC-Q200 qualified
- Quantity: 1500pcs

APPLICATION

- Car navigation, car stereo and car accessories only

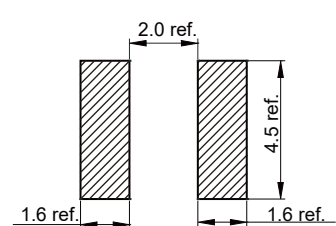
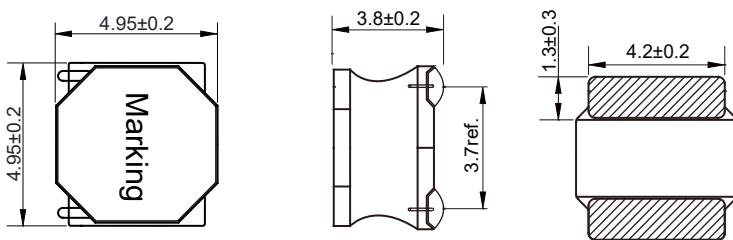
Dimensions: [mm] $\leq 10\mu\text{H}$

Land Pattern: [mm]



Dimensions: [mm] $> 10\mu\text{H}$

Land Pattern: [mm]



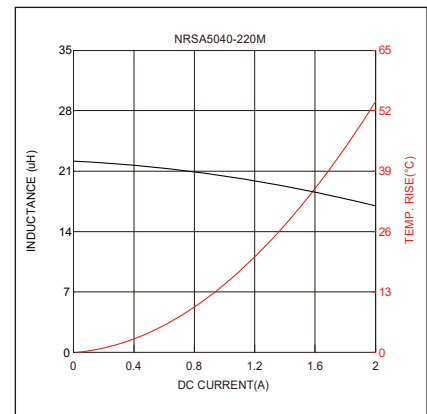
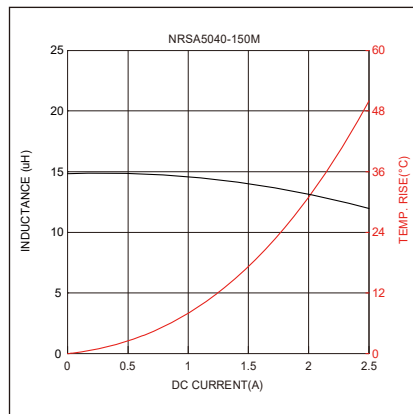
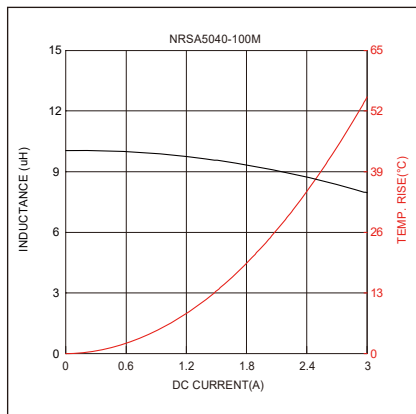
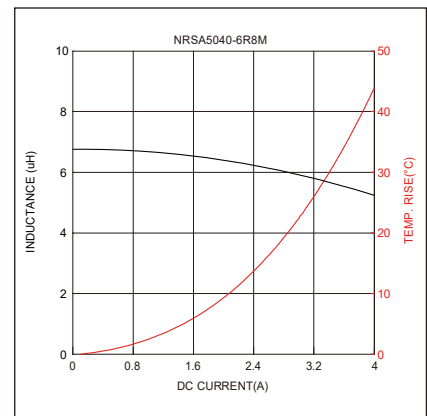
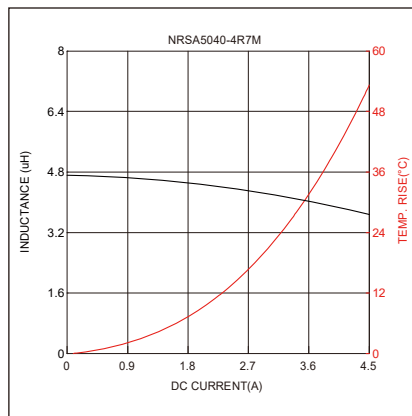
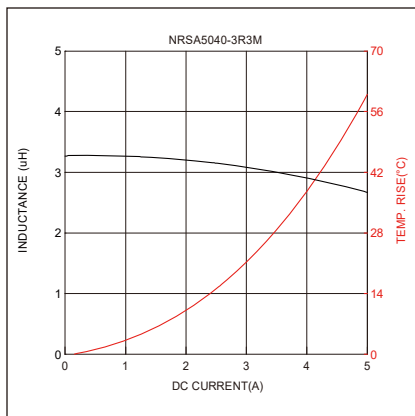
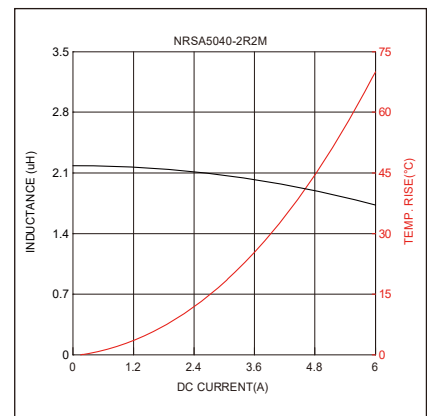
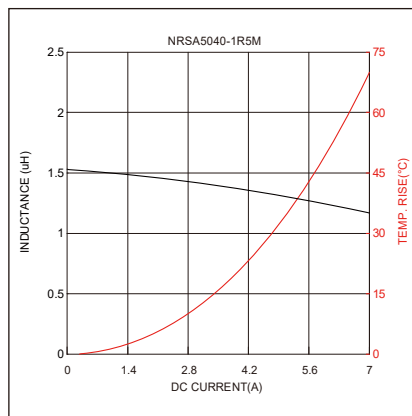
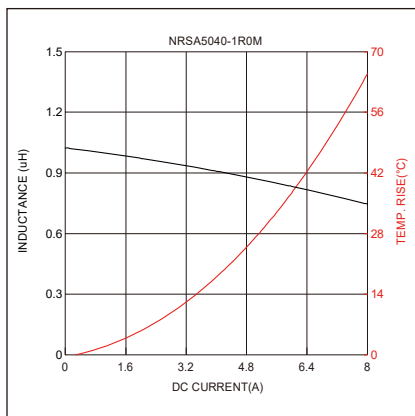
Electrical Properties:

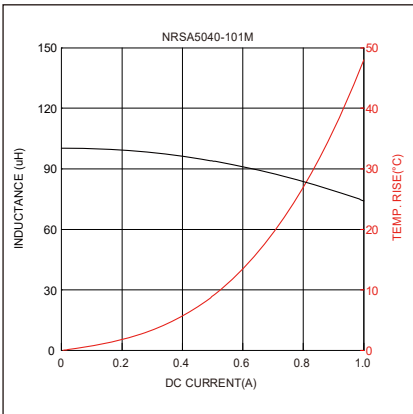
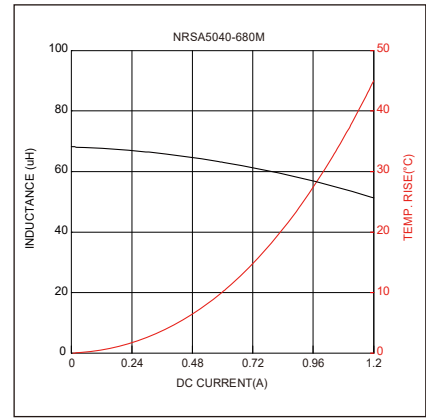
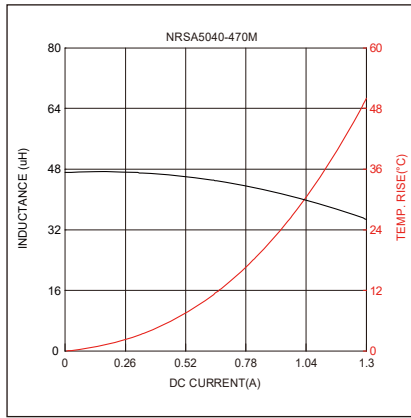
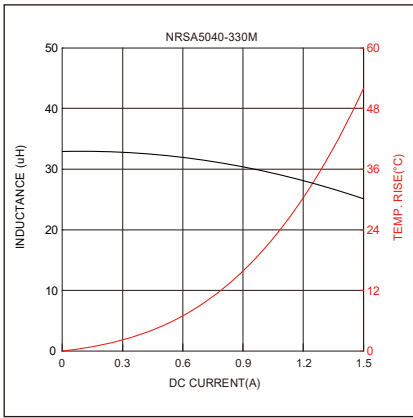
Part No	Inductance @100KHz/1V (μH)	Tolerance	Saturation Current Typ. (A)	Temperature Rise Current Typ. (A)	DCR $\pm 20\%$ (m Ω)
NRSA5040-1R0M	1.0	$\pm 20\%$	7.50	5.00	12
NRSA5040-1R5M	1.5	$\pm 20\%$	6.50	4.50	15
NRSA5040-2R2M	2.2	$\pm 20\%$	5.70	3.80	21
NRSA5040-3R3M	3.3	$\pm 20\%$	4.40	3.50	24
NRSA5040-4R7M	4.7	$\pm 20\%$	3.90	3.20	32
NRSA5040-6R8M	6.8	$\pm 20\%$	3.30	2.50	43
NRSA5040-100M	10	$\pm 20\%$	2.52	2.20	56

Part No	Inductance @100KHz/1V (μH)	Tolerance	Saturation Current Typ. (A)	Temperature Rise Current Typ. (A)	DCR ±20% (mΩ)
NRSA5040-150M	15	±20%	2.00	1.80	80
NRSA5040-220M	22	±20%	1.62	1.50	123
NRSA5040-330M	33	±20%	1.30	1.20	180
NRSA5040-470M	47	±20%	1.10	1.00	270
NRSA5040-680M	68	±20%	0.90	0.80	400
NRSA5040-101M	100	±20%	0.75	0.72	560

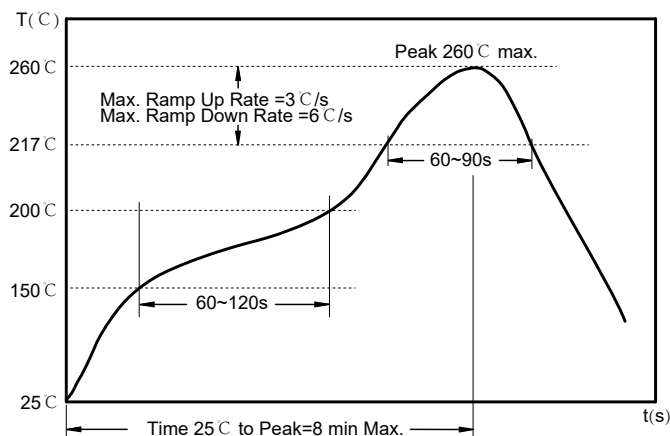
Temperature rising current will cause the coil temperature rise approximately $\Delta t40^{\circ}\text{C}$
 Saturation current will cause L to drop approximately 30% .

Typical Electrical Characteristics:





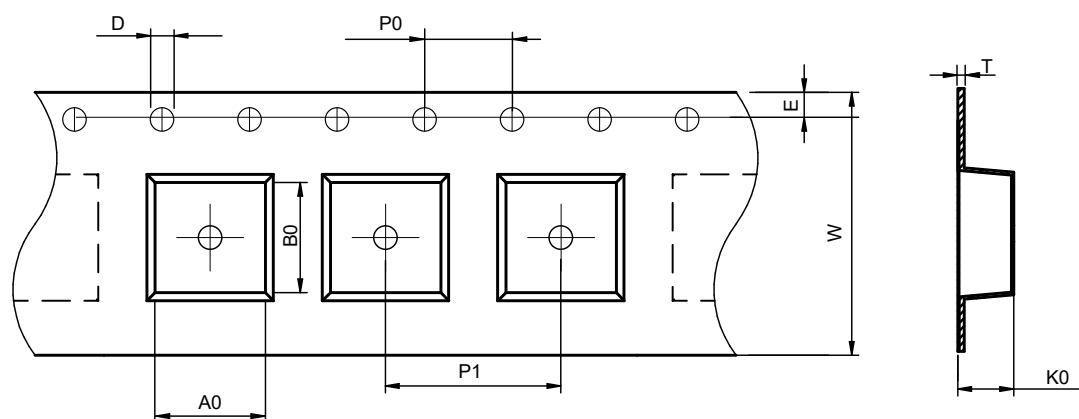
Soldering Reflow:



Preheat condition: 150 ~200 °C / 60~120 sec.
 Allowed time above 217 °C : 60~90 sec.
 Max temperature: 260 °C .
 Allowed Reflow time: 2x max.

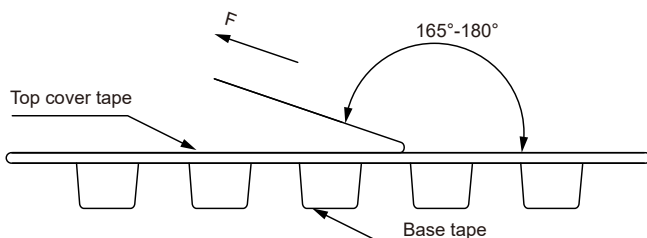
Packaging Information:

Tape Dimension :



Series	A0 (mm)	B0 (mm)	D (mm)	P0 (mm)	P1 (mm)	W (mm)	K0 (mm)	E (mm)	T (mm)
NRSA5040	5.3±0.1	5.3±0.1	1.5±0.1	4.0±0.1	8.0±0.1	12.0±0.3	4.2±0.1	1.75±0.1	0.40±0.05

Peel force of top cover tape:

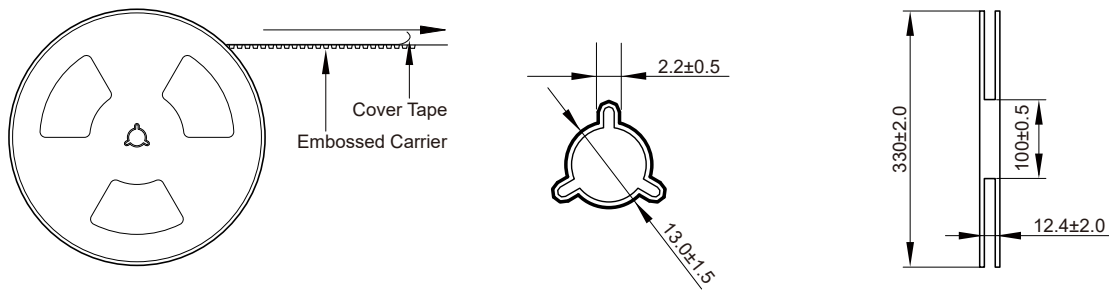


The peel force of top cover tape shall be between 0.3 to 1.17 N

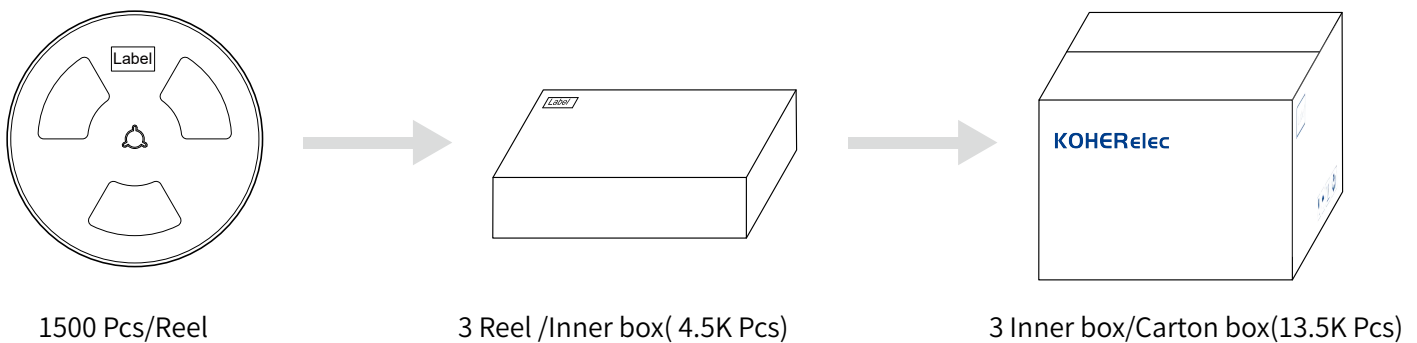
Product Marking:

Marking	Printing (Inductance)
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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.