

Inductors

NRS6045T4R5MMGKV



■ Features

- Item Summary
4.5uH±20%, 3.1A, 6.0x6.0x4.5mm
- Lifecycle Stage
New PN available
- AEC-Q200 qualified
- Standard packaging quantity (minimum)
Taping Embossed 1500pcs

■ Products characteristics table

| | |
|---|---|
| Inductance | 4.5 uH ± 20 % |
| Case Size (mm) | 6.0x6.0 |
| Rated Current (max) | 3.1 A |
| Saturation Current (max) | 4.4 A (ΔL=30%) |
| Saturation Current (typ) | 5.4 A (ΔL=30%) |
| Temperature Rise Current (max) | 3.1 A (ΔT=40°C) |
| Temperature Rise Current (typ) | 3.6 A (ΔT=40°C) |
| DC Resistance (max) | 39 mΩ |
| DC Resistance (typ) | 30 mΩ |
| LQ Measuring Frequency | 100 kHz |
| Self Resonant Frequency (min) | 25 MHz |
| Operating Temp. Range | -40 to +125 °C (Including-self-generated heat) |
| Temperature characteristic (Inductance change) | ± 20 % |
| RoHS Compliance (10 subst.) | Yes |
| REACH Compliance (223 subst.) | Yes |
| Halogen Free | Yes |
| Soldering | Reflow |

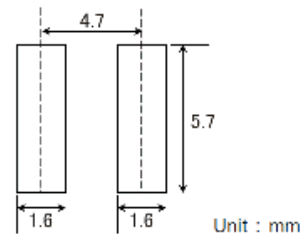
■ External Dimensions

| | |
|--------------|---------------|
| Dimension L | 6.0 ± 0.2 mm |
| Dimension W | 6.0 ± 0.2 mm |
| Dimension H | Max 4.5 mm |
| Dimension e | 1.35 ± 0.2 mm |
| Dimension f | 4.0 ± 0.2 mm |
| Dimension ΔI | Typ 2.3 mm |

■ Recommended Land Patterns

【推奨のランドパターン】
 両面テープ
 ・両面テープの両面にランドパターンを形成する。
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【Dimensional Land Pattern】
 Surface Mounting
 ・Flux is not to be used in the reflow process.
 ・Apply the soldering process to these products in the reflow process.



SMD Power Inductors for Industrial / Automotive Comfort and Safety Applications
(NR series S type)(AEC-Q200 qualified)

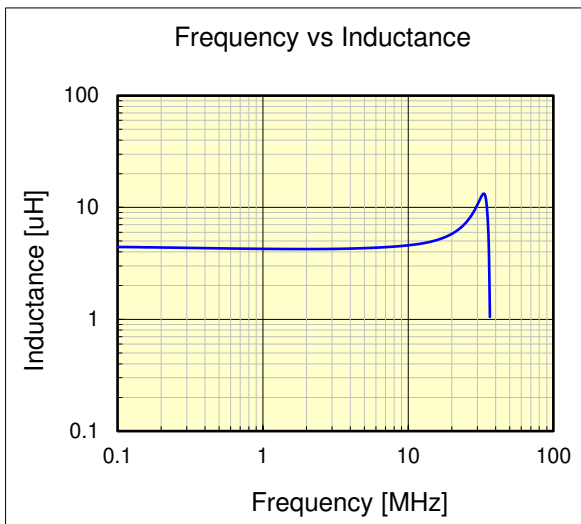
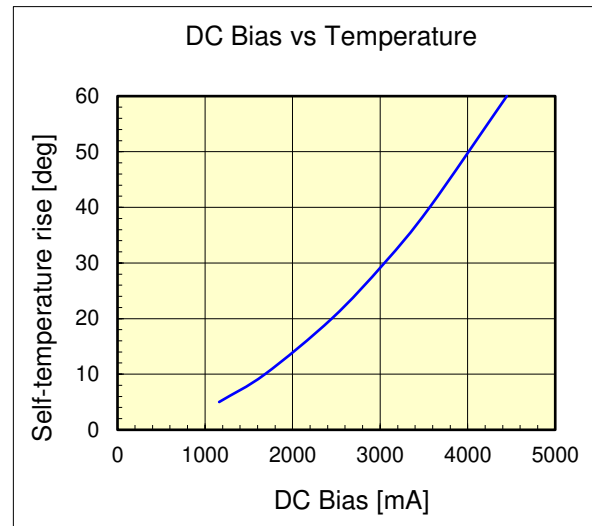
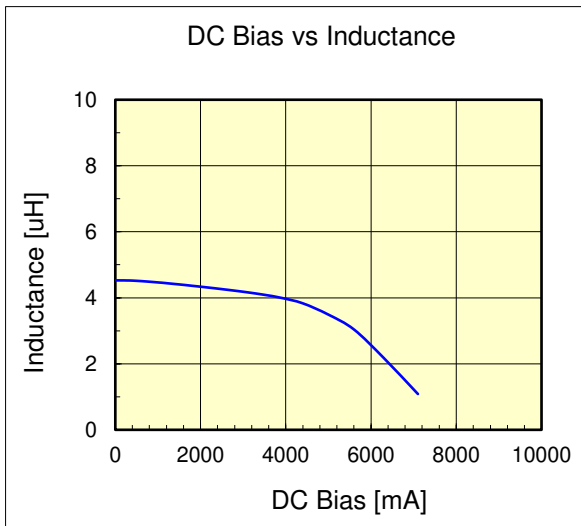
NRS6045T4R5MMGKV



AEC-Q200 qualified

| Dimension | unit : mm | unit : inch |
|-----------|-------------|---------------------|
| Length : | 6.0 +/- 0.2 | (0.236 +/- 0.008) |
| Width : | 6.0 +/- 0.2 | (0.236 +/- 0.008) |
| Height : | 4.5 max. | (0.177 max.) |

| | | |
|--|--------------|----------------------------|
| Inductance : | 4.5 | uH (test freq at 0.1MHz) |
| DC Resistance : | 0.03 / 0.039 | ohm (typ / max) |
| Saturation Current : | 4,400 | mA (max) |
| Temp. rise Current : | 3,100 | mA (max) |
| Saturation current typical : 30% reduction from initial L value. | | |
| Temp rise Current typical : Temperature will rise by 40 deg C | | |



The data is reference only. Electrical characteristics vary depending on environment or measurement condition. TAIYO YUDEN reserves the right to make change to the data at any time without notice. Before making final selection, please check product specification.

The products are tested based on the test conditions and methods defined in AEC-Q200. Please consult with TAIYO YUDEN for the details of the product specification and AEC-Q200 test results, etc., and please review and approve TAIYO YUDEN's product specification before ordering.

Please read this notice before using the TAIYO YUDEN products.



REMINDERS

- Please conduct validation and verification of our products in actual condition of mounting and operating environment before using our products.
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Please do not incorporate our products into any equipment requiring high levels of safety and/or reliability (e.g., aerospace equipment, aviation equipment, medical equipment classified as Class IV by IMDRF, nuclear control equipment, undersea equipment, military equipment).
When our products are used even for high safety and/or reliability-required devices or circuits of general electronic equipment, it is strongly recommended to perform a thorough safety evaluation prior to use of our products and to install a protection circuit as necessary.
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