

## Inductors

## NRS6045T1R5NMGK



## ■ Features

- Item Summary  
1.5uH±30%, 4.2A, 6.0x6.0x4.5mm
- Lifecycle Stage  
New PN available
- Standard packaging quantity (minimum)  
Taping Embossed 1500pcs

## ■ Products characteristics table

Inductance	1.5 uH ± 30 %
Case Size (mm)	6.0x6.0
Rated Current (max)	4.2 A
Saturation Current (max)	8.2 A (ΔL=30%)
Saturation Current (typ)	9.3 A (ΔL=30%)
Temperature Rise Current (max)	4.2 A (ΔT=40°C)
Temperature Rise Current (typ)	4.8 A (ΔT=40°C)
DC Resistance (max)	20.8 mΩ
DC Resistance (typ)	16 mΩ
LQ Measuring Frequency	100 kHz
Self Resonant Frequency (min)	95 MHz
Operating Temp. Range	-25 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】  
 二層基板推奨  
 ・銅箔厚さ0.035mm以上0.05mm以下を推奨（0.05mm以下は、  
 ・銅箔厚さ0.035mm以下は、0.05mm以下を推奨）

【Printed Circuit Board Pattern】  
 Surface Mounting  
 ・High temperature reflow soldering is recommended for these products.  
 ・Apply the soldering process to these products in reflow soldering only.



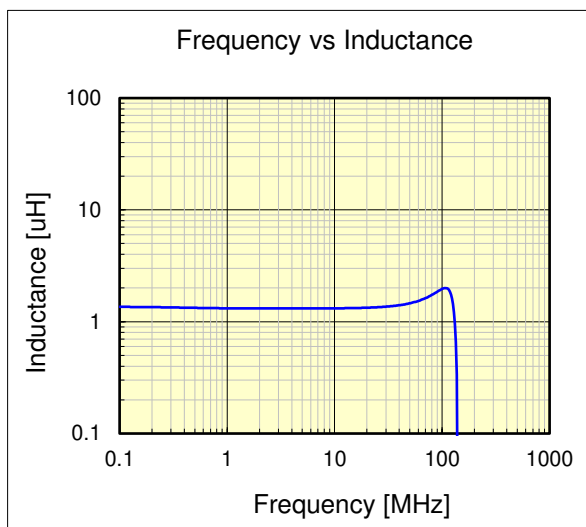
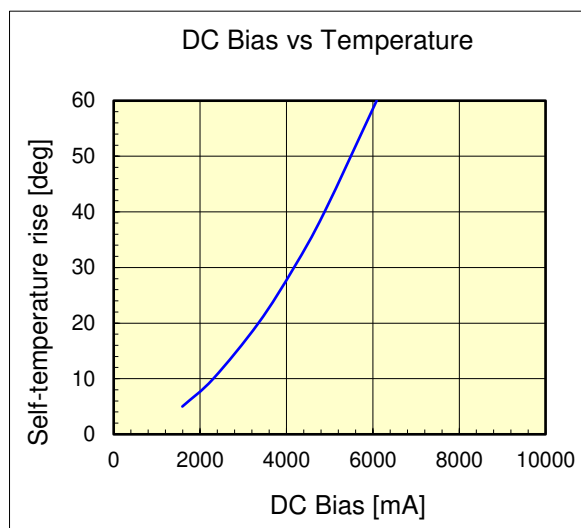
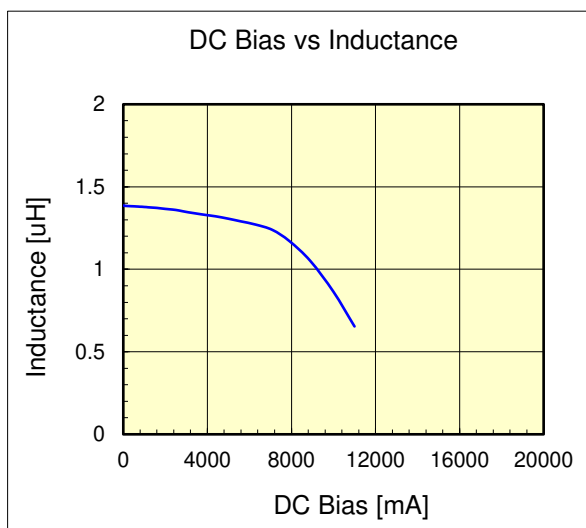
### SMD Power Inductors (NR series S type)

**NRS6045T1R5NMGK**



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 :	1.5	uH	( test freq at 0.1MHz )
DC Resistance :	0.016 / 0.0208	ohm	( typ / max )
Saturation Current :	9,300 / 8,200	mA	( typ / max )
Temp. rise Current :	4,800 / 4,200	mA	( typ / 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.

Please read this notice before using the TAIYO YUDEN 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.  
Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the product listed in this spec sheet for any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.
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