

## Inductors

## NRS4012T2R2MDGJV



## ■ Features

- Item Summary  
2.2uH±20%, 1.65A, 4.0x4.0x1.2mm
- Lifecycle Stage  
New PN available
- AEC-Q200 qualified
- Standard packaging quantity (minimum)  
Taping Embossed 4500pcs

## ■ Products characteristics table

Inductance	2.2 uH ± 20 %
Case Size (mm)	4.0x4.0
Rated Current (max)	1.65 A
Saturation Current (max)	1.65 A (ΔL=30%)
Saturation Current (typ)	1.95 A (ΔL=30%)
Temperature Rise Current (max)	1.9 A (ΔT=40°C)
Temperature Rise Current (typ)	2.1 A (ΔT=40°C)
DC Resistance (max)	72 mΩ
DC Resistance (typ)	60 mΩ
LQ Measuring Frequency	100 kHz
Self Resonant Frequency (min)	70 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

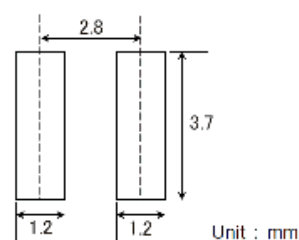
## ■ External Dimensions

Dimension L	4.0 ±0.2 mm
Dimension W	4.0 ±0.2 mm
Dimension H	Max 1.2 mm
Dimension e	1.1 ±0.2 mm
Dimension f	2.5 ±0.2 mm

## ■ Recommended Land Patterns

【推奨のランドパターン】  
 一、二層基板  
 ・両面銅箔層の厚みは0.035mm以上とする。  
 ・銅箔層の厚みは0.035mm以上とする。

【Recommend Land Pattern】  
 -Two layer board  
 -Copper layer thickness should be 0.035mm or more.  
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SMD Power Inductors for Industrial / Automotive Comfort and Safety Applications  
(NR series S type)(AEC-Q200 qualified)

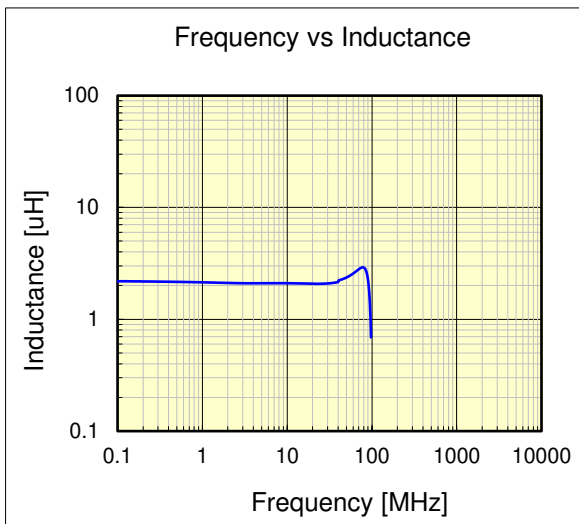
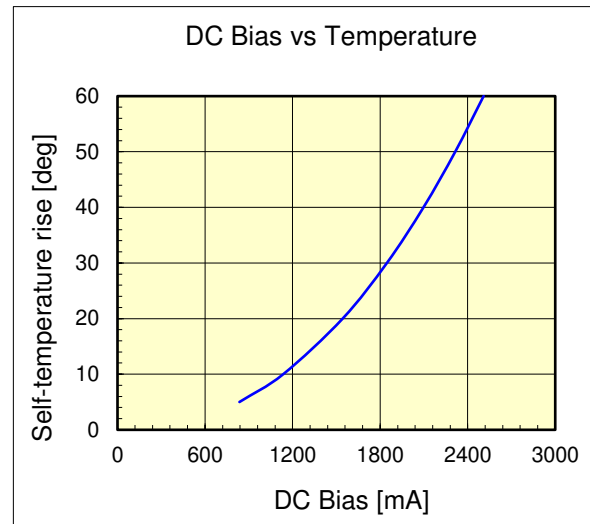
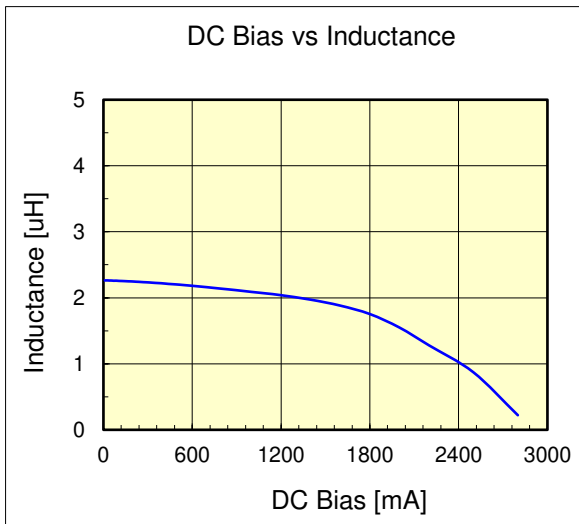
**NRS4012T2R2MDGJV**



**AEC-Q200 qualified**

Dimension	unit : mm	unit : inch
Length :	4.0 +/- 0.2	(0.157 +/- 0.008)
Width :	4.0 +/- 0.2	(0.157 +/- 0.008)
Height :	1.2 max.	(0.047 max.)

Inductance :	2.2	uH	(test freq at 0.1MHz)
DC Resistance :	0.06 / 0.072	ohm	(typ / max)
Saturation Current :	1,650	mA	(max)
Temp. rise Current :	1,900	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.  
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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