

## Inductors

## NRS5014T2R2NMGGV



## ■ Features

- Item Summary  
2.2uH±30%, 2A, 4.9x4.9x1.4mm
- Lifecycle Stage  
New PN available
- AEC-Q200 qualified
- Standard packaging quantity (minimum)  
Taping Embossed 1000pcs

## ■ Products characteristics table

|   |   |
|---|---|
| Inductance  | 2.2 uH ± 30 %   |
| Case Size (mm)                                    | 4.9x4.9   |
| Rated Current (max)                               | 2 A   |
| Saturation Current (max)                          | 2.8 A ( $\Delta L=30\%$ )   |
| Saturation Current (typ)                          | 3.1 A ( $\Delta L=30\%$ )   |
| Temperature Rise Current (max)                    | 2 A ( $\Delta T=40^{\circ}\text{C}$ )                             |
| Temperature Rise Current (typ)                    | 2.4 A ( $\Delta T=40^{\circ}\text{C}$ )                           |
| DC Resistance (max)                               | 78 m $\Omega$   |
| DC Resistance (typ)                               | 65 m $\Omega$   |
| LQ Measuring Frequency                            | 100 kHz   |
| Self Resonant Frequency (min)                     | 56 MHz  |
| Operating Temp. Range                             | -40 to +125 $^{\circ}\text{C}$<br>(Including-self-generated heat) |
| Temperature characteristic<br>(Inductance change) | ± 20 %  |
| RoHS Compliance (10 subst.)                       | Yes   |
| REACH Compliance (223 subst.)                     | Yes   |
| Halogen Free                                      | Yes   |
| Soldering   | Reflow  |

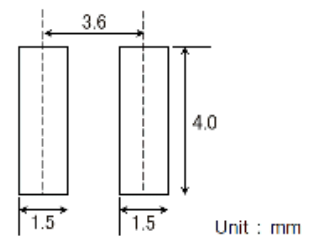
## ■ External Dimensions

|                      |              |
|----------------------|--------------|
| Dimension L          | 4.9 ± 0.2 mm |
| Dimension W          | 4.9 ± 0.2 mm |
| Dimension H          | Max 1.4 mm   |
| Dimension e          | 1.2 ± 0.2 mm |
| Dimension f          | 3.3 ± 0.2 mm |
| Dimension $\Delta I$ | Typ 1.3 mm   |

## ■ Recommended Land Patterns

【推奨のランドパターン】  
 二層基板の場合  
 ・銅箔の厚さを0.03mm以上0.05mm以下に設定してください。  
 ・銅箔の表面粗さを0.1μm以下に設定してください。

【Printed Circuit Board Pattern】  
 Surface Mounting  
 ・If a three-layer board is used, the copper thickness should be 0.03mm to 0.05mm.  
 ・Apply the soldering process to these products on the back side.



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

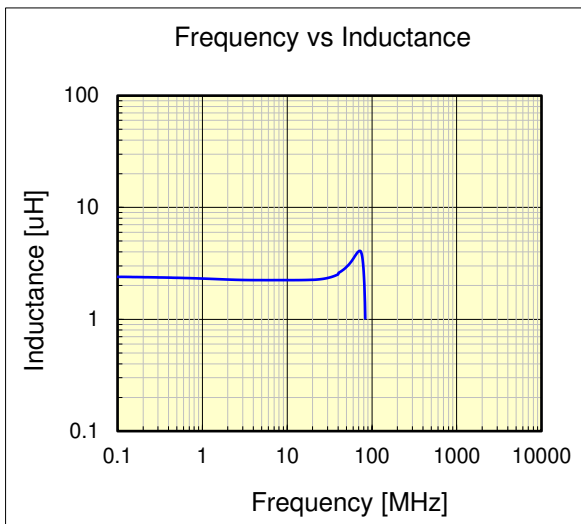
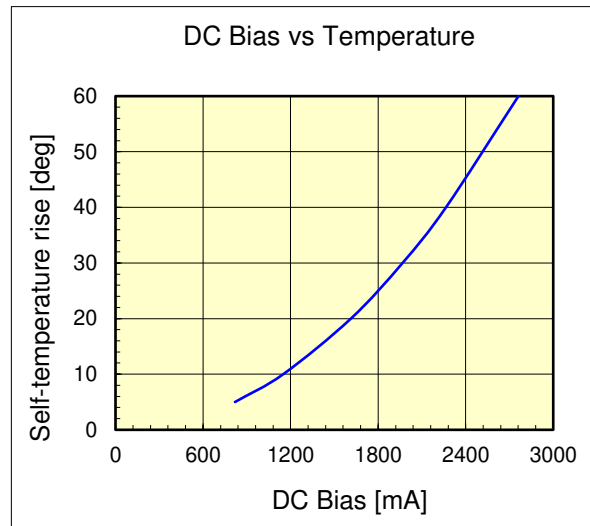
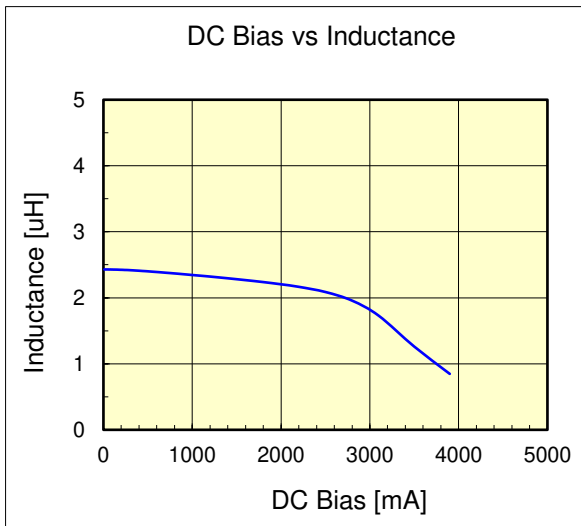
**NRS5014T2R2NMGGV**



**AEC-Q200 qualified**

| Dimension | unit : mm   | unit : inch       |
|-----------|-------------|-------------------|
| Length :  | 4.9 +/- 0.2 | (0.193 +/- 0.008) |
| Width :   | 4.9 +/- 0.2 | (0.193 +/- 0.008) |
| Height :  | 1.4 max.    | (0.055 max.)      |

|  |               |                          |
|--|---------------|--------------------------|
| Inductance :   | 2.2           | uH (test freq at 0.1MHz) |
| DC Resistance :  | 0.065 / 0.078 | ohm (typ / max)          |
| Saturation Current :   | 2,800         | mA (max)                 |
| Temp. rise Current :   | 2,000         | 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.



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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).  
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