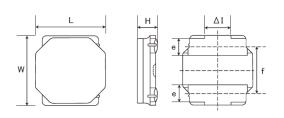
# **Spec Sheet**

SMD Power Inductors for Automotive / Industrial Applications (NR series S type)

# NRS6012T330MMGJV



#### Features

- Item Summary
  - 33uH±20%, 0.55A, 6.0x6.0x1.2mm
- Lifecycle Stage
- Mass Production
- AEC-Q200 qualified
- Standard packaging quantity (minimum)
  - Taping Embossed 1000pcs

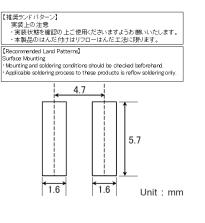
#### Products characteristics table

| Inductance  | 33 uH ± 20 %                                     |  |
|---|--|--|
| Case Size (mm)                                    | 6.0x6.0  |  |
| Rated Current (max)                               | 0.55 A   |  |
| Saturation Current (max)                          | 0.59 A   |  |
| Temperature Rise Current (max)                    | 0.55 A   |  |
| DC Resistance (max)                               | 0.696 Ω  |  |
| DC Resistance (typ)                               | 0.58 Ω   |  |
| LQ Measuring Frequency                            | 100 kHz  |  |
| Self Resonant Frequency (min)                     | 8 MHz  |  |
| Operating Temp. Range                             | -40 to +125 ℃<br>(Including-self-generated heat) |  |
| Temperature characteristic<br>(Inductance change) | ± 20 %   |  |
| RoHS2 Compliance (10 subst.)                      | Yes  |  |
| REACH Compliance (173 subst.)                     | Yes  |  |
| Halogen Free                                      | Yes  |  |
| Soldering   | Reflow   |  |

#### External Dimensions

| Dimension L          | $6.0 \pm 0.2 \text{ mm}$ |
|----------------------|--------------------------|
| Dimension W          | 6.0 ±0.2 mm              |
| Dimension H          | Max 1.2 mm               |
| Dimension e          | $1.35\pm0.2$ mm          |
| Dimension f          | 4.0 ±0.2 mm              |
| Dimension <b>Δ</b> I | Typ 2.3 mm               |
|                      |                          |

### Recommended Land Patterns

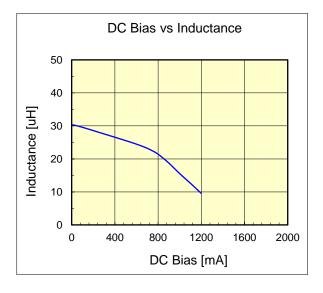


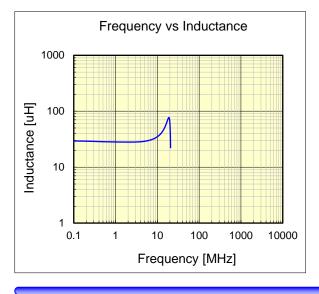
The data is reference only. Electrical characteristics vary depending on environment or measurement condition. TAIYO YUDEN reserves the right to make change to the Date at any time without notice. Before making final selection, please check product specification. 2017.04.30

**TAIYO YUDEN** 

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

| NRS6012T330MMGJV   | Dimension   | unit : mm  | unit : inch       |
|--------------------|---|--|-------------------|
|                    | Length :  | 6.0 +/- 0.2  | (0.236 +/- 0.008) |
|                    | Width :   | 6.0 +/- 0.2  | (0.236 +/- 0.008) |
|                    | Height :  | 1.2 max.   | (0.047 max.)      |
|                    | Inductance :<br>DC Resistance :<br>Saturation Current :<br>Temp. rise Current : | 33 uH<br>0.58 / 0.696<br>590 mA ( ma.<br>550 mA ( ma.<br>typical : 30% reduction | x)                |
| AEC-Q200 gualified |   | typical : Temperature  |                   |
|                    |   |  |                   |





DC Bias vs Temperature 60 Self-temperature rise [deg] 50 40 30 20 10 0 200 400 600 800 1000 0 DC Bias [mA]

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.