

## Inductors

## NS10145T681MNA



## ■ Features

- Item Summary  
680uH±20%, 0.42A, 10.1x10.1x4.5mm
- Lifecycle Stage  
New PN available
- Standard packaging quantity (minimum)  
Taping Embossed 2000pcs(500pcs\*4reel)

## ■ Products characteristics table

Inductance	680 uH ± 20 %
Case Size (mm)	10.1x10.1
Rated Current (max)	0.42 A
Saturation Current (max)	0.5 A (ΔL=30%)
Temperature Rise Current (max)	0.42 A (ΔT=40°C)
DC Resistance (max)	1.89 Ω
DC Resistance (typ)	1.57 Ω
LQ Measuring Frequency	100 kHz
Self Resonant Frequency (min)	2.3 MHz
Operating Temp. Range	-40 to +125 °C (Including-self-generated heat)
Temperature characteristic (Inductance change)	± 15 %
RoHS Compliance (10 subst.)	Yes
REACH Compliance (223 subst.)	Yes
Halogen Free	Yes
Soldering	Reflow

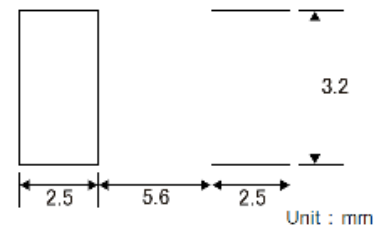
## ■ External Dimensions

Dimension L	10.1 ±0.3 mm
Dimension W	10.1 ±0.3 mm
Dimension H	4.5 ±0.35 mm
Dimension a	2.8 ±0.1 mm
Dimension b	2.0 ±0.15 mm

## ■ Recommended Land Patterns

【注意事項】  
 ・本製品は、表面実装用です。  
 ・実装の際は、必ず実装条件を参照してください。  
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【Dimensional Land Pattern】  
 ・This is the recommended land pattern for reflow soldering.  
 ・Apply the soldering process to these products in reflow soldering only.



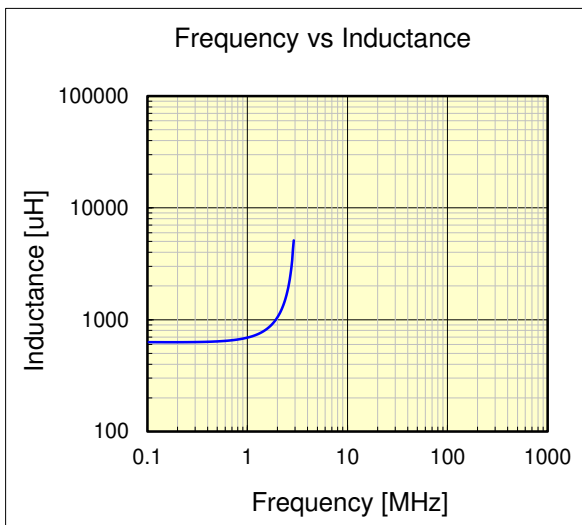
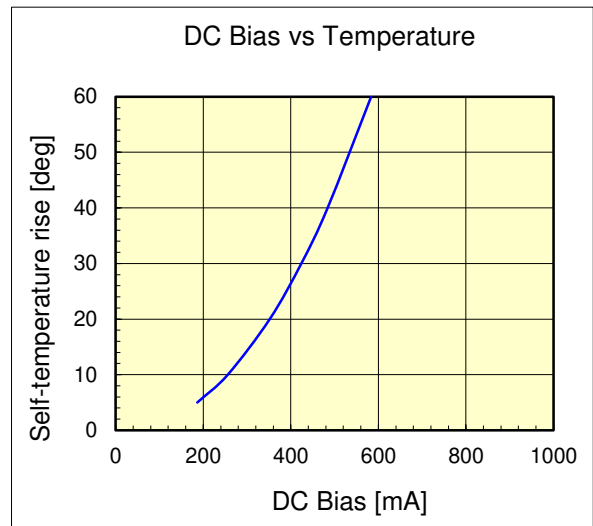
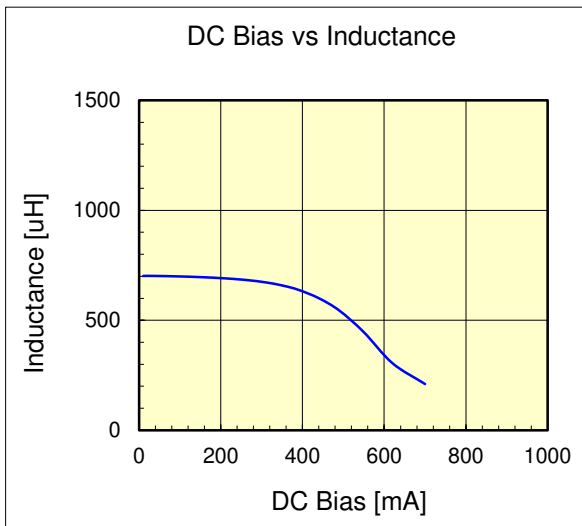
SMD Power Inductors (NS series)

NS10145T681MNA



Dimension	unit : mm	unit : inch
Length :	10.1 +/- 0.3	(0.398 +/- 0.012)
Width :	10.1 +/- 0.3	(0.398 +/- 0.012)
Height :	4.5 +/- 0.35	(0.177 +/- 0.014)

Inductance :	680	uH (test freq at 0.1MHz)
DC Resistance :	1.57 / 1.884	ohm (typ / max)
Saturation Current :	0.50	A (max)
Temp. rise Current :	0.42	A (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.



## REMINDERS

- Please conduct validation and verification of our products in actual condition of mounting and operating environment before using our products.
- The product listed in this spec sheet is intended for use in general electronic equipment (e.g., AV equipment, OA equipment, home electric appliances, office equipment, information and communication equipment including, without limitation, mobile phone, and PC). Please be sure to contact TAIYO YUDEN for further information before using the products for any equipment which may directly cause loss of human life or bodily injury (e.g., transportation equipment including, without limitation, automotive powertrain control system, train control system, and ship control system, traffic signal equipment, disaster prevention equipment, medical equipment classified as Class I, II or III by IMDRF, highly public information network equipment including, without limitation, telephone exchange, and base station).  
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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The product listed in this spec sheet may require specific procedures for export according to “U.S. Export Administration Regulations”, “Foreign Exchange and Foreign Trade Control Law” of Japan, and other applicable regulations. Should you have any questions on this matter, please contact our sales staff.