

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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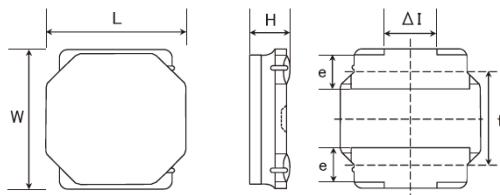
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Spec Sheet

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

NRS5010T220MMGFV



Features

- Item Summary
22uH±20%, 0.45A, 4.9x4.9x1.0mm
- Lifecycle Stage
Mass Production
- AEC-Q200 qualified
- Standard packaging quantity (minimum)
Taping Embossed 1000pcs

Products characteristics table

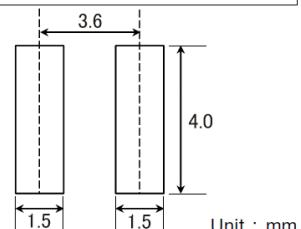
Inductance	22 uH ± 20 %
Case Size (mm)	4.9x4.9
Rated Current (max)	0.45 A
Saturation Current (max)	0.55 A
Temperature Rise Current (max)	0.45 A
DC Resistance (max)	0.72 Ω
DC Resistance (typ)	0.6 Ω
LQ Measuring Frequency	100 kHz
Self Resonant Frequency (min)	15 MHz
Operating Temp. Range	-40 to +125 °C (Including-self-generated heat)
Temperature characteristic (Inductance change)	± 20 %
RoHS2 Compliance (10 subst.)	Yes
REACH Compliance (173 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 1.0 mm
Dimension e	1.2 ±0.2 mm
Dimension f	3.3 ±0.2 mm
Dimension ΔI	Typ 1.3 mm

Recommended Land Patterns

【推奨ランドパターン】 実装上の注意 ・実装状態を確認の上ご使用くださいますようお願いいたします。 ・本製品のはんだ付けはリフローはんだ工法に限ります。
[Recommended Land Patterns] Surface Mounting • Mounting and soldering conditions should be checked beforehand. • Applicable soldering process to these products is reflow soldering only.



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

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

NRS5010T220MMGFV



AEC-Q200 qualified

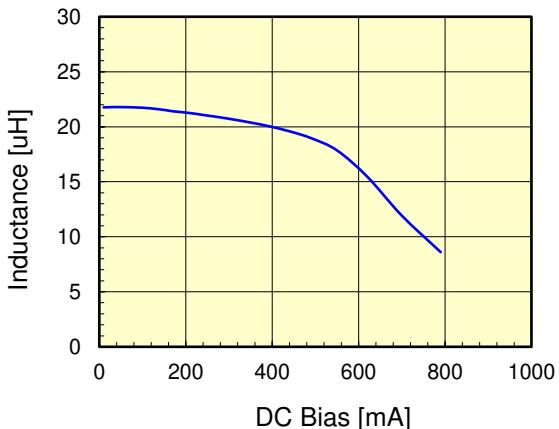
Dimension	unit : mm	unit : inch
Length :	4.9 + / - 0.2	(0.193 + / - 0.008)
Width :	4.9 + / - 0.2	(0.193 + / - 0.008)
Height :	1.0 max.	(0.039 max.)

Inductance :	22	uH	(test freq at 0.1MHz)
DC Resistance :	0.6 /	0.72	ohm (typ / max)
Saturation Current :	550	mA (max)	
Temp. rise Current :	450	mA (max)	

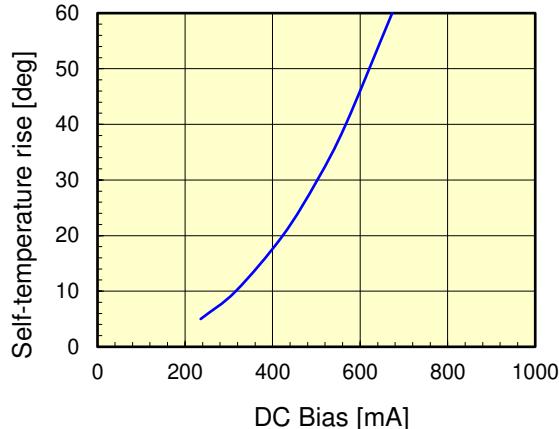
Saturation current typical : 30% reduction from initial L value.

Temp rise Current typical : Temperature will rise by 40 deg C

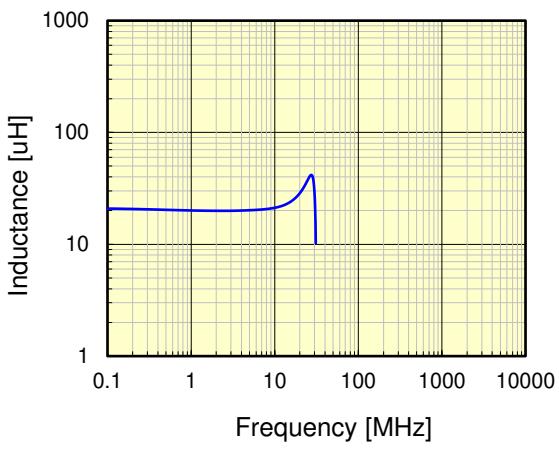
DC Bias vs Inductance



DC Bias vs Temperature



Frequency vs Inductance



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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.