

PRODUCT PROFILE & CROSS-REFERENCE

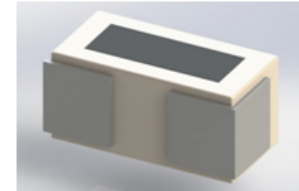


Product Category:

Passives; Magnetics; Inductors; High Frequency

NML-HQ & NML-SQ series

High Frequency SMT Chip Inductors



NIC Components Corp. is pleased to announce the release of the NML-HQ and NML-SQ series of SMT chip inductors, featuring high-frequency performance in a high reliable monolithic construction. Both product series are supplied in ultra-miniature 01005 and 0201 case sizes with high DCI current ratings up to 1100mA. NML-HQ has a lower profile, with a maximum height of 0.22mm for 01005 size and 0.32mm in 0201 size, for height constrained handheld and mobile wireless applications.

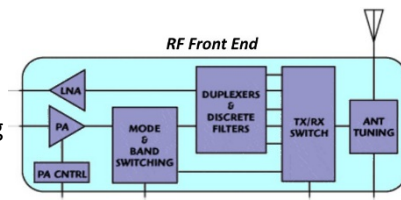
Both NML-HQ and NML-SQ series are for use in precision tuning, filtering, and impedance matching circuits in high-frequency RF wireless applications. The inductance value range covers 0.2nH to 150nH in $\pm 0.1\text{nH}$ (B), $\pm 0.2\text{nH}$ (C), $\pm 0.3\text{nH}$ (D) $\pm 3\%$ (H), and $\pm 5\%$ (J) tolerance with an operating temperature range of -55°C to $+125^{\circ}\text{C}$. Self-resonant frequency (SRF) covers a range from 700MHz to 17 GHz, and typical quality factors (Q) cover a range from 50 to 100 at 2 to 3GHz for $L < 10\text{nH}$ in 0201 case sizes. NML-SQ has the advantage of higher Q & higher SRF for values $> 1\text{nH}$ in 0201 size than NML-HQ. Both series are RoHS & REACH compliant, and compatible with Pb-free reflow soldering processes. Evaluation samples and product kits are available upon request. Please contact NIC today to review your requirements

Features:

- Ultra-miniature 01005 and 0201 case sizes
- High Q (Typ: 50 to 100 @ 2 to 3 GHz)
- High SRF up to 17 GHz
- Wide Inductance value range: 0.2nH to 150nH
- DC Current Ratings up to 1100mA
- Wide Temperature Range: -55°C to $+125^{\circ}\text{C}$

Circuit Applications:

- Tuning
- Filtering
- Impedance matching
- Antenna circuits
- Oscillator circuits
- RF Front Ends
- Low-noise amplifiers (LNAs)
- Down-conversion
- A to D
- Wireless modules



End-Use Applications:

- Wireless LANs
- Bluetooth, Zigbee & Wi-Fi
- RF Transceivers
- Smart Home
- Wireless Doorbells
- Garage Door openers
- Wireless Fire, Security & Alarm
- Wireless Monitoring; Medical & Industrial
- Ultra-wideband (UWB)
- Wireless monitors, printing & file transfers
- Wireless bar code scanners - Point of Sale
- Smart Sensors
- RFID
- LTE & 5 G devices
- Industrial Remote Controls
- Radio-controlled devices
- Drones
- Wireless microphones and earphones
- Near-field communication (NFC)

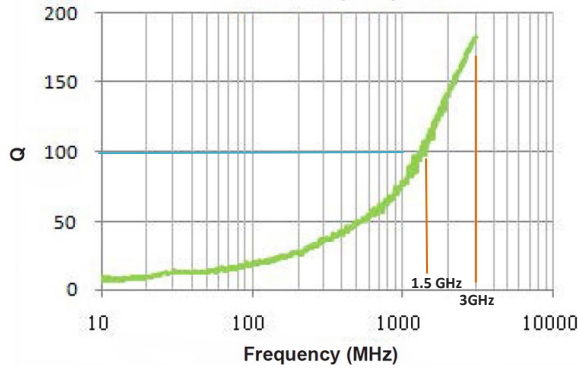


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Typical Q greater than 100 at 1.5 to 3GHz / 0201 size 1.0nH

NML-HQ02_1N0TR1100F
Q vs Frequency



Upgrades:

Characteristic	NML series	NML-HQ series	NML-SQ series
Size	0201, 0402 & 0603	01005 & 0201	01005 & 0201
Typ Q Range (0201 Size)	20-36 @ 2GHz	≤ 100 @ 2GHz*	≤ 100 @ 2GHz*
SRF	300MHz-10GHz	700MHz to 17 GHz	700MHz to 17 GHz
DC Current	Up to 1000mA	up to 1100mA	up to 1100mA

* - 2 to 3GHz for L > 1nH



Product Specifications

NML-HQ	www.niccomp.com/products/catalog/nml-hq.pdf
NML-SQ	www.niccomp.com/products/catalog/nml-sq.pdf



Cross Reference:

Case Size	NIC	Coil-Craft	Johanson Technology	Murata	Taiyo Yuden	TDK	WURTH
01005	NML-HQ01 NML-SQ01	---	L-03_	LQP02TQ	HKQ0402	MHQ0402PSA MLG0402Q	---
0201	NML-HQ02 NML-SQ02	0201DS	L-05_	LQP03HQ LQP03TQ	---	MHQ0603P	WE-MK 744782_



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