PRODUCT SPECIFICATION

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DESCRIPTION	**DRAWN BY**	**DESIGNED BY**	**CHECKED BY**	**APPROVED BY**
NIP3015GX Series	Amily	Scott	Wiley	LSC

NIP3015GX Series Engineering Specification

1. Scope

Feature

- Low RDC, high current handling inductor.
- Magnetically shielded structure that ensures the high-density mounting configurations.
- Flat bottom surface ensures secure, reliable mounting.
- Provided in embossed carrier tape packaging for use with automatic mounting machines.

Applications

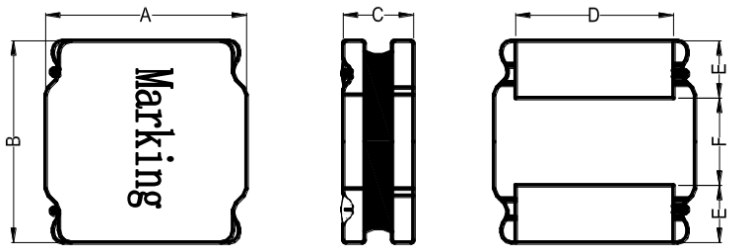
- Ideally used in Notebook, SSD, PDA, DSC, DC-DC Converters, etc.

2. Explanation of Part Number

N	I	P	3	0	1	5	G	X	—	1	R	0	M
			1				2			3			4	5

- 1 : Product Name, Wire-wound power inductor
- 2 : Dimensions
- 3 : Type Name
- 4 : Product Inductance (μH)
- 5 : Model code: Inductance tolerance (M±20%; N±30%)

3. Physical Dimensions



A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
3.0±0.2	3.0±0.2	1.5±0.1	2.5±0.2	0.75±0.2	1.5±0.2

4. General specifications

4.1. Temperature Specifications

Operating Temperature range: -40℃ to +125℃ (Including self-heating)

4.2. Electrical Specifications

Part No.	Inductance	DC Resistance	Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)	Idc (A)	Isat (A)
	±20 %, 100 kHz/1V	±30%	MAX	MAX.
NIP3015GX-1R0M	1.0	37	1.90	2.10
NIP3015GX-1R5M	1.5	50	1.70	1.80
NIP3015GX-2R2M	2.2	60	1.45	1.60
NIP3015GX-3R3M	3.3	80	1.20	1.32
NIP3015GX-4R7M	4.7	125	1.08	1.10
NIP3015GX-6R8M	6.8	200	0.85	0.87
NIP3015GX-100M	10	250	0.70	0.72
NIP3015GX-150M	15	350	0.64	0.65
NIP3015GX-220M	22	460	0.57	0.52
NIP3015GX-330M	33	780	0.35	0.38
NIP3015GX-470M	47	1200	0.30	0.35

Notes

1. All test data is referenced to 25 °C ambient
2. Idc(A):DC current (A) that will cause an approximate ΔT of 40 °C (reference ambient temperature is 25°C)
3. Isat(A):DC current (A) that will cause L0 to drop approximately 35 %

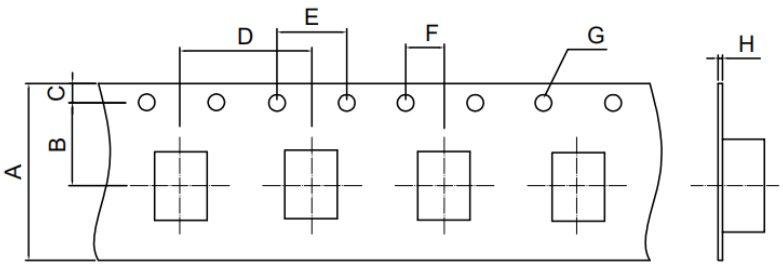
5. Reliability and Test Conditions

Item	Specification and Requirement	Test Method
Solderability	The surface of terminal immersed shall be minimum of 95% covered with a new coating of solder	Solder heat proof with dipping condition: 260 ± 5 ℃ for 3 ± 0.5 seconds
Terminal Strength	No electrodes detachment should be found	Add static load 4.9 N(500gf) to inductor for 10 ± 2 sec
Vibration	Inductance change: Within ± 20% Without mechanical damage	The specimen shall be subjected to a vibration of 1.5mm amplitude, sweep frequency 10~55~10Hz after vibration for 1 hours
Thermal Shock	Inductance change: Within ± 20% Without distinct damage in appearance	Applying 20 continuous cycles of temperature change of -40℃ ±3℃ for 30 min and 125℃ ±2℃ for 30 min with the transit period of 2min or less.
High Temperature Resistance	Inductance change: Within ± 20% Without distinct damage in appearance	1. Environment condition: 85 ± 2 ℃ Applied Current: Rated current 2. Duration: 500 + 4 / -0 hours
Humidity Resistance	Inductance change: Within ± 20% Without distinct damage in appearance	1. Environment condition: 40 ± 2 ℃ Humidity: 90–95% 2. Duration: 96 ± 4 hours
High/Low Temperature Store	Inductance change: Within ± 20% Without distinct damage in appearance	Store temperature: High: +125 ± 2 ℃, 96 ± 1 hours Low: -40 ± 3 ℃, 96 ± 1 hours

Note: Specimens shall be stabilized under standard atmospheric conditions for 1 h before measurement.
Measurement shall be made within 1h~ 2h.

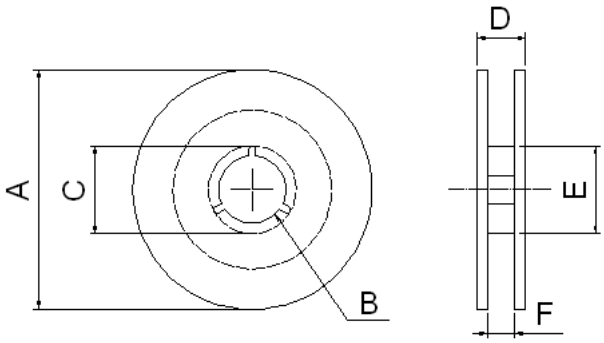
6. Taping Package

6.1 Dimension of Tape (Unit: mm)



A	8.00
B	3.50
C	1.75
D	4.00
E	4.00
F	2.00
G	Ø1.50
H	0.30

6.2 Dimension of Reel (Unit: mm)



A	178
B	Ø13.0
C	21.0
D	10.8
E	60.0
F	9.0

6.3 Packaging Quantities:

2,000 PCS/Reel.

6.4 Label Marking

The label specified as follows shall be put on the side of reel.

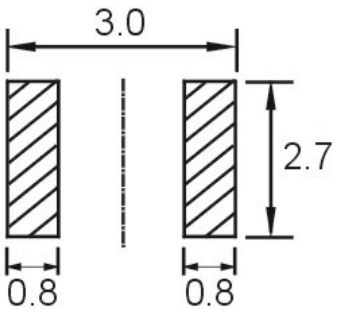
(1) Part No.

(2) Quantity

(3) Lot No.

* Part No. And Quantity shall be marked on outer packaging.

7. Recommended Land Pattern (unit: mm)



8. Recommended Reflow Soldering