

Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	LQH32CN Series
Spec No:	L137

【For Customer Approval Only】

If you Approval, Please Stamp

【RoHS Compliant Parts】

Approved By	Checked By	Prepared By
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Specification Sheet for SMD Power Inductor

1. Scope

This specification applies to the LQH32CN Series of wire wound SMD power inductor.

2. Product Description and Identification (Part Number)

1) Description:

LQH32CN series of Wire wound SMD power inductor.



2) Product Identification (Part Number)

LQ	H	32	C	N	R15	M	3	L	CAY
Product ID	Structure	Dimension (L*W)	Applications	Category	Inductance	Tolerance	Electrode	Packaging L:Taping	Ceaiya

3. Electrical Characteristics

Please refer to Item 5.

1) Operating temperature range (individual chip without packing): -40°C ~ +125°C (Including Self-heating) .

2) Storage temperature range (packaging conditions): -10°C ~ +40°C and RH 70% (Max.).

4. Shape and Dimensions (Unit:mm)

Dimensions and recommended PCB pattern for reflow soldering, please see Fig4-1 and Table4-1

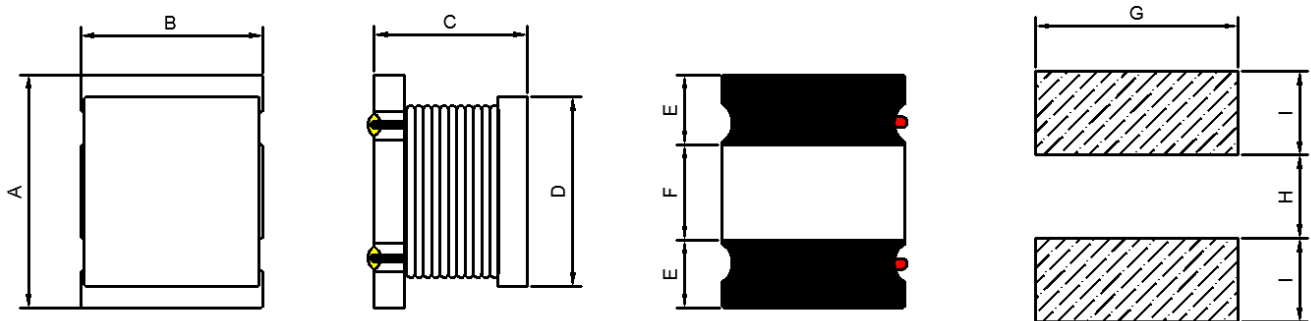


Fig4-1.

Table 4-1.

A	B	C	D	E	F	G	H	I
3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	2.5 ± 0.3	1.1 ± 0.3	1.0 ± 0.3	2.5Ref	1.3Ref	1.0Ref

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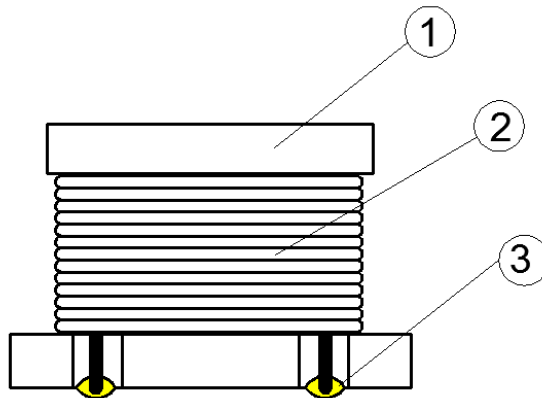
5. Electrical Characteristics

Part Number	Inductance	DC Resistance	Rated Current	Self-resonant Frequency
	1MHz/0.25V	$\pm 30\%$	Max.	Min.
Units	μH	$\text{m}\Omega$	A	MHz
Symbol	L	DCR	I_{sat}	S.R.F
LQH32CNR27M3LCAY	$0.27 \pm 20\%$	34	1.25	250
LQH32CNR47M3LCAY	$0.47 \pm 20\%$	42	1.10	150
LQH32CN1R0M3LCAY	$1.0 \pm 20\%$	60	1.00	100
LQH32CN2R2M3LCAY	$2.2 \pm 20\%$	97	0.79	64
LQH32CN4R7M3LCAY	$4.7 \pm 20\%$	150	0.65	43
LQH32CN8R2M3LCAY	$8.2 \pm 20\%$	250	0.52	30
LQH32CN100K3LCAY	$10 \pm 10\%$	300	0.45	26
LQH32CN101K3LCAY	$100 \pm 10\%$	3100	0.10	10

Note: This indicates the value of current when the inductance is 10% lower than its initial value at D.C superposition and D.C current when temperature rise $\Delta T=40^{\circ}\text{C}$. ($T_a=25^{\circ}\text{C}$)

6. Structure

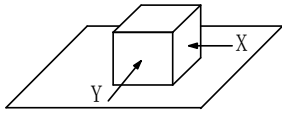
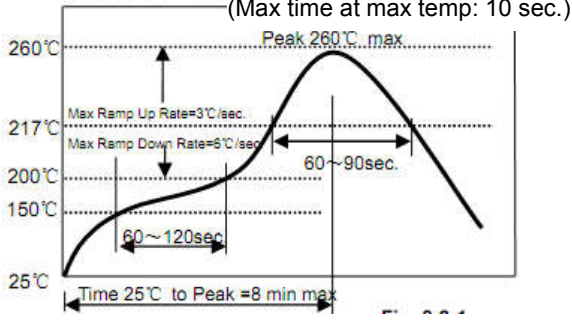
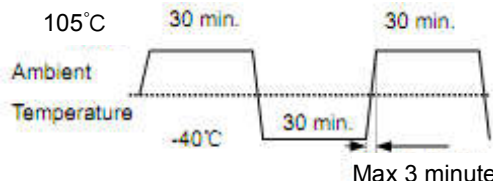
The structure of LQH32CN product.



No.	Part name	Material
①	Drum Core	Ni-Zn Ferrite Core
②	Wire	Polyurethane enameled copper wire
③	Electrode	Top surface solder coating Sn99%、Ag0.3%、Cu0.7%

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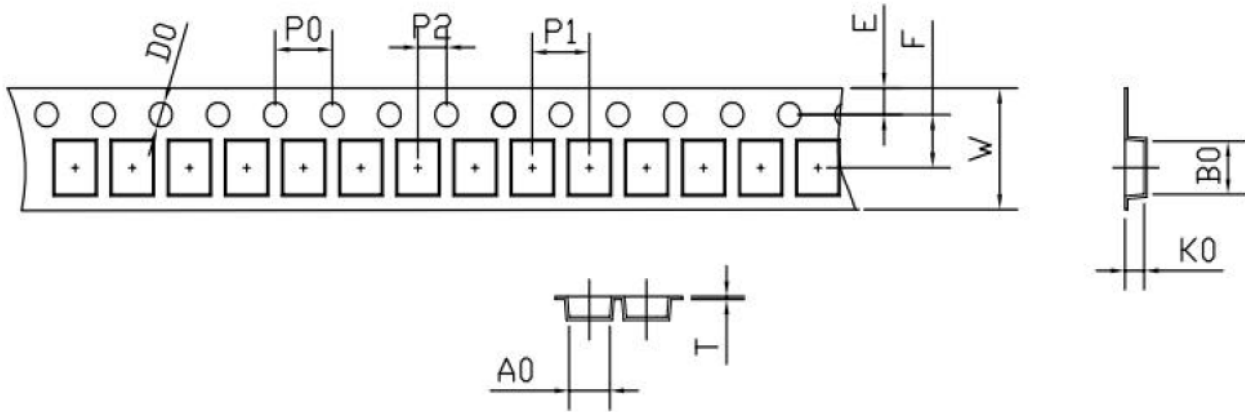
7. Reliability Test

Items	Requirements	Test Methods and Remarks
7.1 Terminal Strength	No removal or split of the termination or other defects shall occur.  Fig.7.1-1	1) Solder the inductor to the testing jig (glass epoxy board shown in Fig.7.1-1) using eutectic solder. Then apply a force in the direction of the arrow. 2) 10N force. 3) Keep time: 5±2s
7.2 High Temperature	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :125±5°C 2) Duration : 96 ±4 Hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
7.3 Low Temperature	1. No visible mechanical damage 2. Inductance change: Within ±10%	1) Temperature and time: -40±5°C 2) Duration: 96±4 hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
7.4 Vibration test	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Frequency range:10Hz~55Hz~10Hz 2) Amplitude:1.5mm p-p 3) Direction:X,Y,Z 4) Time:1 minute/cycle,2hours per axis
7.5 High Temperature Storage Tested	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1)Storage Temperature :60±2°C 2) Relative Humidity :90-95% RH 3) Duration : 96 ±4 Hours 4)Recovery : then measured at room ambient temperature after placing 24 hours.
7.6 Resistance to Soldering Heat	1. No visible mechanical damage. 2. Inductance change: Within ±10%  Fig.7.6-1	1) Re-flowing Profile: Please refer to Fig.7.6-1 2) Test board thickness: 1.0mm 3) Test board material: glass epoxy resin 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring
7.7 Thermal Shock	1. No visible mechanical damage. 2. Inductance change: Within ±10%  Fig.7.7-1	1) Temperature and time: -40±3°C for 30±3 min→105°C for 30±3min, please refer to Fig.7.7-1. 2) Transforming interval: Max,3 minute 3) Tested cycle: 100 cycles 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring

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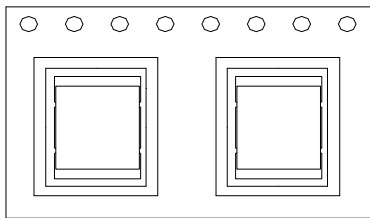
8. Packaging and Marking:

8-1. Carrier Tape Dimensions:

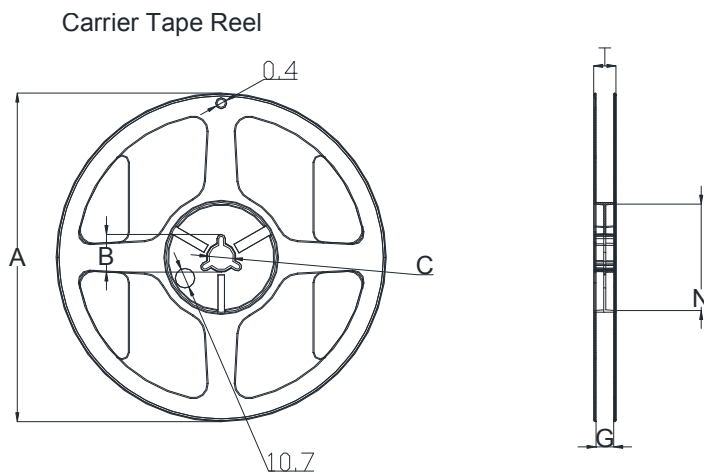


ITEM	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM	8.00	2.90	3.60	2.25	4.00	3.5	1.75	1.50	4.00	2.00	0.25
TOLE	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	±0.1	±0.1	±0.05

8-2. Taping Dimensions:



8-3. Reel Dimensions:



Type	A	B	C	G	N	T
8mm	178	20.7±0.8	13±0.4	9	60	10.8

8-4. Packaging Quantity:

2KPCS/ Reel