

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 |
|-------------|------------|-------------|
| 李庆辉 | 刘志坚 | 劳水花 |

深圳市柯爱亚电子有限公司

Shenzhen Ceaiya Electronics Co., Ltd.

深圳地址 1: 深圳市龙华区观湖街道鹭湖社区观盛二路 5 号捷顺科技中心 B706

东莞地址 2: 东莞清溪镇青滨东路 105 号力合紫荆智能制造中心 10 栋

Http://www.szceaiya.com

Tel: 0769-89135516

Fax: 0769-89135519

Specification Sheet for SMD Power Inductor

【Version of Changed Record】

| Rev. | Effective Date | Changed Contents | Change Reasons | Approved By |
|------|----------------|------------------|----------------|-------------|
| A0 | 2024-01-26 | New release | / | Li qing hui |
| | | | | |

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

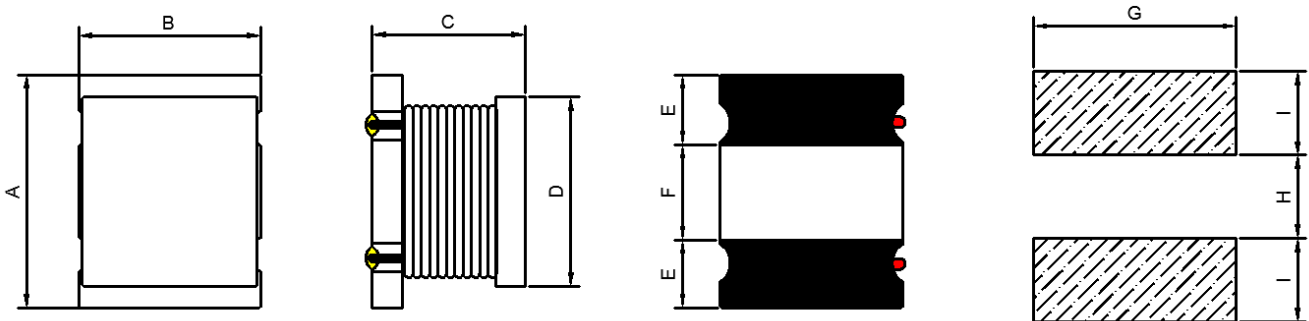


Fig4-1.

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 |

Specification Sheet for SMD Power Inductor

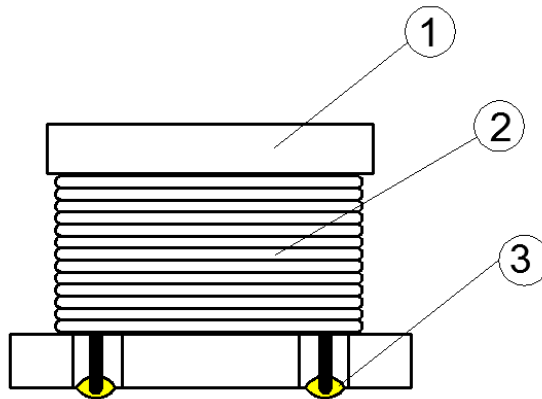
5. Electrical Characteristics

| 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 |
| LQH32CN100K3LCAY | $10 \pm 10\%$ | 300 | 0.45 | 26 |

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

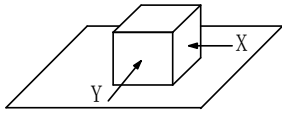
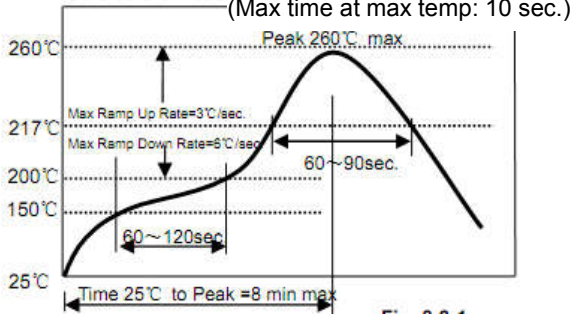
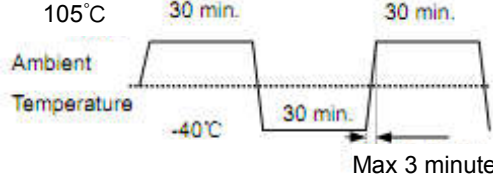
The structure of LQH32CN product.



| 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% |

Specification Sheet for SMD Power Inductor

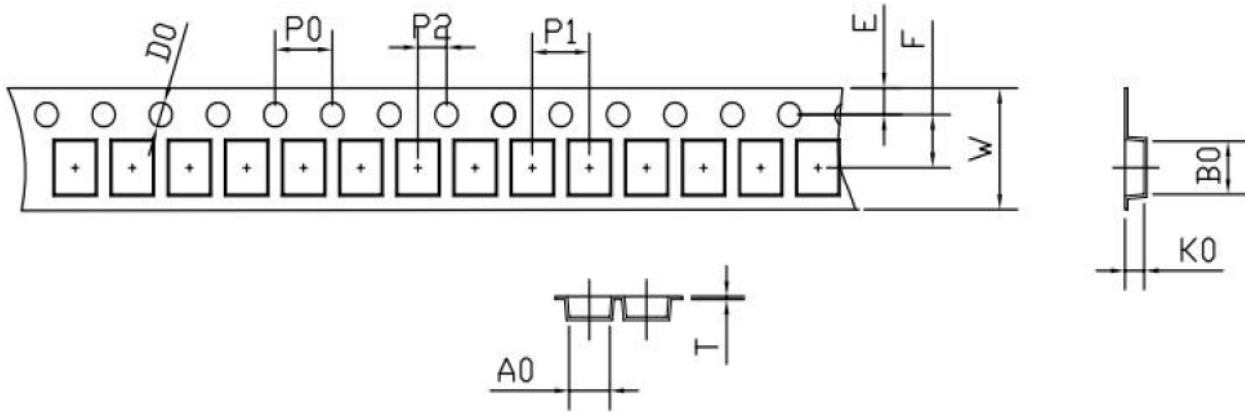
7. Reliability Test

| 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 |

Specification Sheet for SMD Power Inductor

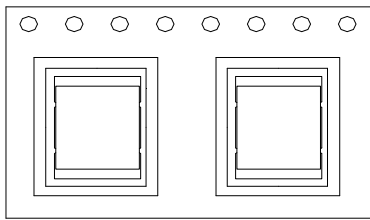
8. Packaging and Marking:

8-1. Carrier Tape Dimensions:

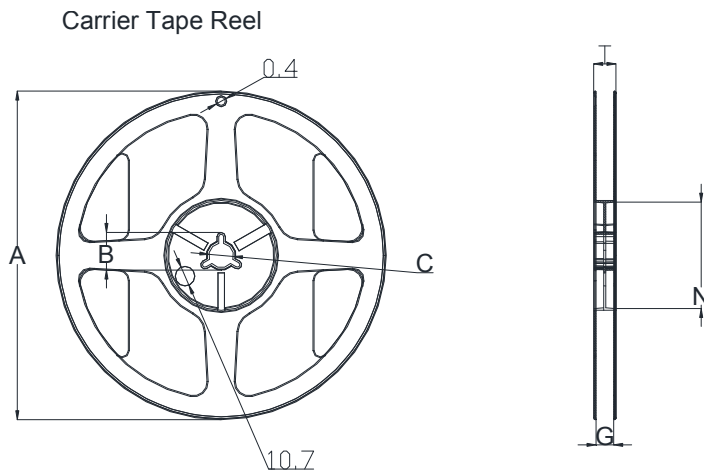


| ITEM | W | A0 | B0 | K0 | P | F | E | D0 | P0 | P2 | T |
|------|------|------|------|------|------|------|------|------|------|------|-------|
| DIM | 8.00 | 2.90 | 3.60 | 2.25 | 4.00 | 3.5 | 1.75 | 1.50 | 4.00 | 2.00 | 0.25 |
| TOLE | ±0.3 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | +0.1 | ±0.1 |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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Fixed Inductors](#) category:

Click to view products by [Ceaiya](#) manufacturer:

Other Similar products are found below :

[CR32NP-100KC](#) [CR54NP-470LC](#) [70F224AI](#) [MGDQ4-00004-P](#) [MHQ1005P10NJ](#) [MHQ1005P1N0S](#) [MHQ1005P2N4S](#) [MHQ1005P3N6S](#)
[MHQ1005P5N1S](#) [MHQ1005P8N2J](#) [PE-53601NL](#) [PE-53602NL](#) [PG0936.113NLT](#) [9220-20](#) [9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#)
[1206CS-471XJ](#) [HC2-R47-R](#) [HC8-1R2-R](#) [HCF1305-3R3-R](#) [1206CS-151XG](#) [RCH664NP-140L](#) [RCH664NP-4R7M](#) [RCP1317NP-391L](#)
[RCR110DNP-331L](#) [DH2280-4R7M](#) [DS1608C-106](#) [B10TJ](#) [B82498B3101J000](#) [ELJ-RE27NJF2](#) [1812CS-153XJ](#) [1812CS-183XJ](#) [1812CS-](#)
[223XJ](#) [1812LS-104XJ](#) [1812LS-105XJ](#) [1812LS-124XJ](#) [1812LS-154XJ](#) [1812LS-223XJ](#) [1812LS-224XJ](#) [1812LS-563XJ](#) [1812LS-683XJ](#)
[1812LS-824XJ](#) [NIN-FB101JTR110F](#) [NIN-FB471JTR62F](#) [NIN-FC1R5JTR220F](#) [NIN-HCR15JTRF](#) [NIN-HCR33JTRF](#) [NIN-HDR22JTRF](#)