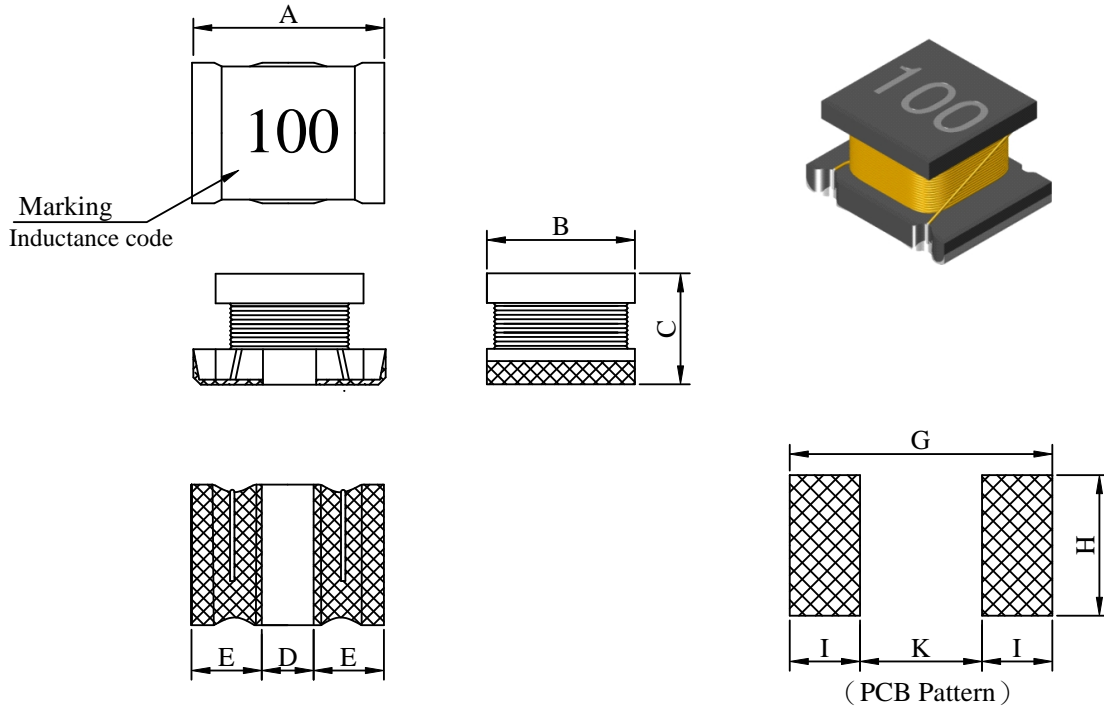


# SPECIFICATION FOR APPROVAL

REF. :

|               |                    |               |                  |      |   |
|---------------|--------------------|---------------|------------------|------|---|
| PROD.<br>NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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## I . Configuration and dimensions :



Unit : mm

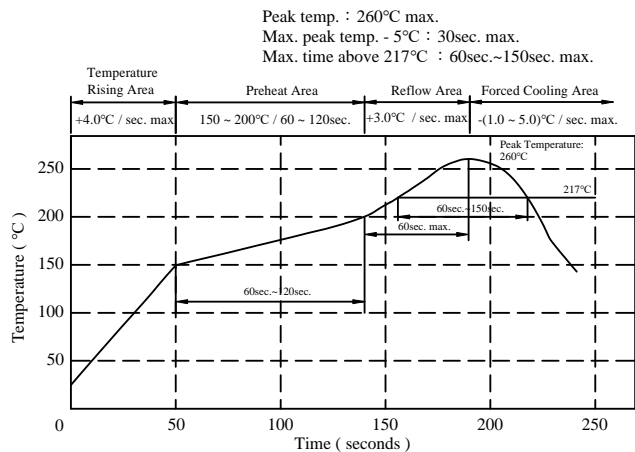
| A         | B         | C         | D         | E         | G         | H         | I         | K         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3.20 ±0.3 | 2.50 ±0.3 | 2.00 ±0.4 | 1.30 typ. | 1.20 ref. | 3.80 ref. | 2.80 ref. | 1.40 ref. | 1.00 ref. |

## II . Description :

- a . Ferrite drum core construction
- b . Enamelled copper wire : H class
- c . Product weight : 0.046 g ( ref. )
- d . Moisture sensitivity Level 1
- e . Products comply with RoHS' requirements
- f . Halogen free

## III . General specification :

- a . Storage temp. : -40°C ----+125°C
- b . Operating temp. : -40°C----+125°C  
(Temp. rise included)
- c . Resistance to solder heat : 260°C.10 sec.



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# SPECIFICATION FOR APPROVAL

REF. :

|               |                    |               |                  |      |   |
|---------------|--------------------|---------------|------------------|------|---|
| PROD.<br>NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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## IV . Electrical characteristics :

| DWG. No.         | Inductance<br>( $\mu$ H) | Test Freq.<br>( Hz ) | SRF<br>(MHz)<br>min. | RDC<br>( $\Omega$ )<br>max. | IDC<br>(mA)<br>max. |
|------------------|--------------------------|----------------------|----------------------|-----------------------------|---------------------|
| SQ32251R0M3□-□□□ | 1.0 $\pm$ 20%            | 1M                   | 96.0                 | 0.117                       | 800                 |
| SQ32252R2M3□-□□□ | 2.2 $\pm$ 20%            | 1M                   | 64.0                 | 0.169                       | 600                 |
| SQ32254R7M3□-□□□ | 4.7 $\pm$ 20%            | 1M                   | 43.0                 | 0.260                       | 450                 |
| SQ3225100K3□-□□□ | 10.0 $\pm$ 10%           | 1M                   | 26.0                 | 0.572                       | 300                 |
| SQ3225220K3□-□□□ | 22.0 $\pm$ 10%           | 1M                   | 19.0                 | 0.923                       | 250                 |
| SQ3225470K3□-□□□ | 47.0 $\pm$ 10%           | 1M                   | 15.0                 | 1.690                       | 170                 |
| SQ3225101K3□-□□□ | 100.0 $\pm$ 10%          | 1M                   | 10.0                 | 4.550                       | 100                 |
| SQ3225221K3□-□□□ | 220.0 $\pm$ 10%          | 1M                   | 6.8                  | 10.900                      | 70                  |
| SQ3225331K3□-□□□ | 330.0 $\pm$ 10%          | 1M                   | 5.6                  | 13.000                      | 60                  |
| SQ3225391K3□-□□□ | 390.0 $\pm$ 10%          | 1M                   | 5.0                  | 22.100                      | 60                  |
| SQ3225471K3□-□□□ | 470.0 $\pm$ 10%          | 1M                   | 5.0                  | 24.700                      | 60                  |
| SQ3225561K3□-□□□ | 560.0 $\pm$ 10%          | 1k                   | 5.0                  | 28.600                      | 60                  |

- 1). Electrical specifications at 25°C
- 2). IDC base on Temp. rise 20°C max. &  $\Delta$  L/L0A=10% max.

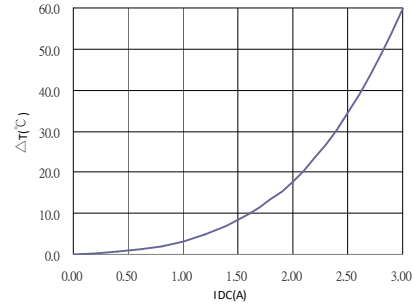
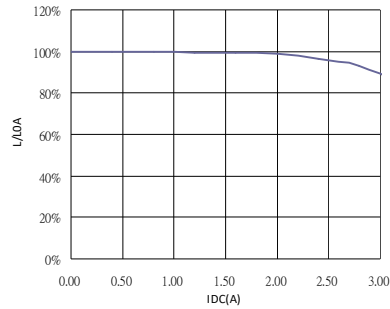
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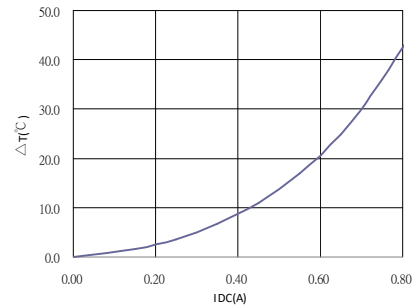
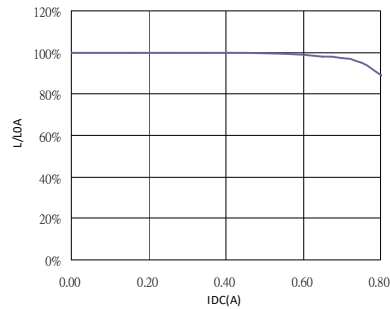
|               |                    |               |                  |      |   |
|---------------|--------------------|---------------|------------------|------|---|
| PROD.<br>NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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V . Curve :

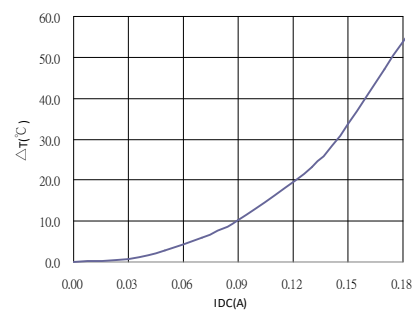
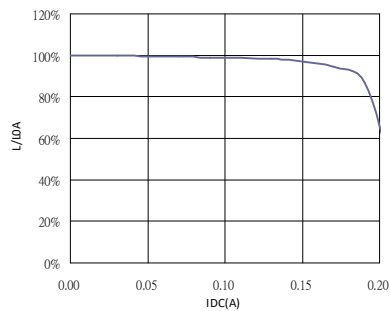
SQ32251R0M3□



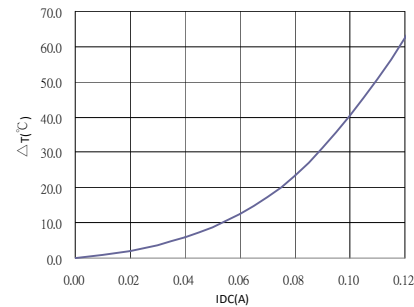
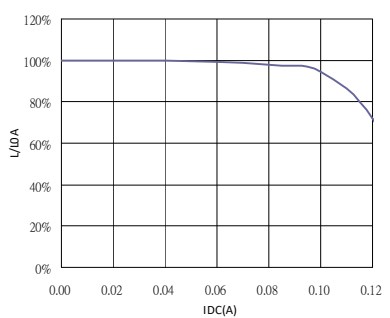
SQ3225100K3□



SQ3225221K3□



SQ3225561K3□



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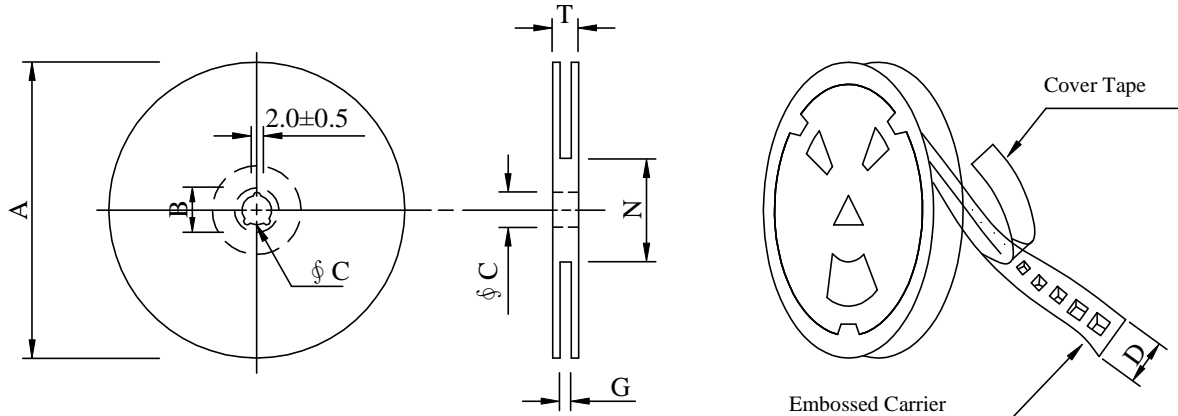
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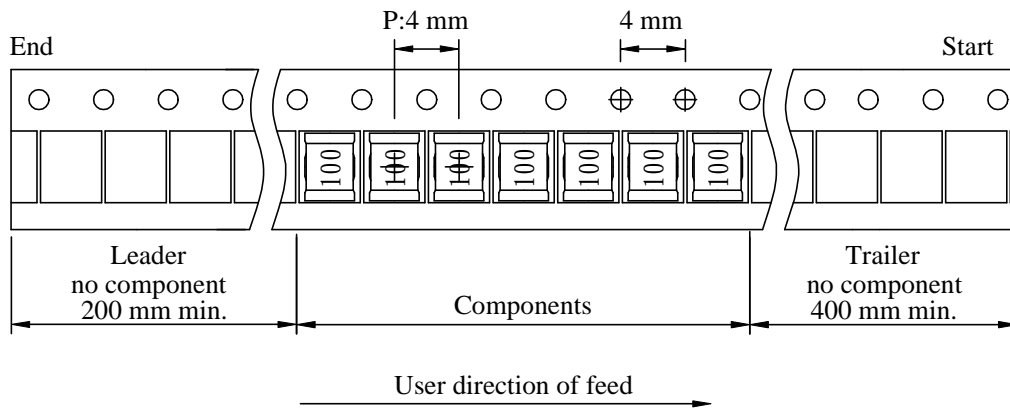
|            |                    |               |                  |      |   |
|------------|--------------------|---------------|------------------|------|---|
| PROD. NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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## VI . Packaging information :

### ( 1 ) Configuration



※Carrier Tape Width : D



### ( 2 ) Dimensions

Unit:mm

| Style      | A   | B      | C  | D | G                | N                | T    |
|------------|-----|--------|----|---|------------------|------------------|------|
| 07(S) - 08 | 183 | 21±0.8 | 13 | 8 | 10 <sup>+0</sup> | 50 <sup>-0</sup> | 12.5 |

### ( 3 ) Q'TY & G.W. Per package

| Code | Inner: Reel |          |            | Outer : Carton |           |              |
|------|-------------|----------|------------|----------------|-----------|--------------|
|      | Q'TY (PCS)  | G.W. (g) | Style      | Q'TY (PCS)     | G.W. (kg) | Size (cm)    |
| B    | 2,000       | 190      | 07(S) - 08 | 100,000        | 11.15     | 42 x 41 x 24 |

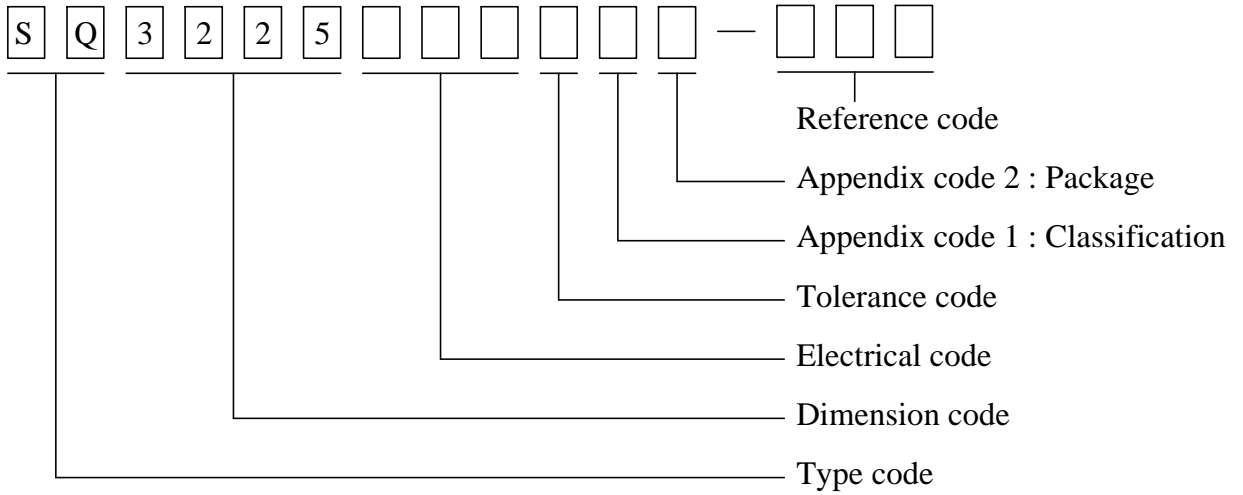
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# SPECIFICATION FOR APPROVAL

REF. :

|               |                    |               |                  |      |   |
|---------------|--------------------|---------------|------------------|------|---|
| PROD.<br>NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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VII . Drawing number expression :



Appendix code 1 : Product Classification

Appendix code 2 : Package Information

| Code | Inner package       | Cover tape | Carrier tape   | Bag        | Package Q'TY | Remark |
|------|---------------------|------------|----------------|------------|--------------|--------|
| B    | T /R (Reel package) | UCT        | Non-antistatic | Antistatic | 2,000 pcs    |        |

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# SPECIFICATION FOR APPROVAL

REF. :

|            |                    |               |                  |      |   |
|------------|--------------------|---------------|------------------|------|---|
| PROD. NAME | SMD Power Inductor | ABC'S DWG NO. | SQ3225□□□□3□-□□□ |      |   |
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## VIII . Reliability test :

| Item                                | Reference documents                    | Test Condition   | Test Specification  |
|-------------------------------------|--|--|---|
| 1.High Temperature Exposure         | MIL-STD-202 Method 108                 | 1.Temperature: 125±2°C<br>2.Time:96±2 hours.   | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 2.Temperature Cycling               | JESD22-A 104                           | 1.Temperature: -40°C ~ +125°C<br>2.Number of cycle:100 cycle<br>3.Dwell time:30 minutes  | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 3.Biased Humidity Test              | MIL-STD-202 Method 103                 | 1.Temperature : 85±2 °C<br>2.Humidity: 85% RH.<br>3.Time:96±2 Hours  | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 4.Operational Life                  | JESD22-A 108                           | 1.Temperature: 125°C(Temp. rise included)<br>2.Time:96±2 hours.<br>3.Rated current   | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 5.External Visual                   | JESD22-B 101 & MIL-STD-883 Method 2009 | Inspect product constructions, marking and workmanship.  | 1.No pollution on the surface of products.<br>2.Clear marking.<br>3.No crack.                             |
| 6.Physical Dimensions               | JESD22-B 100                           | Verify physical dimensions to the applicable product detail specification.   | Per product specification standard  |
| 7.Resistance to solvents            | MIL-STD-202 Method 215                 | Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.  | 1.No body change in apperance.<br>2.No marking blurred.<br>3.Inductance shall not change more than ±10%.  |
| 8. Vibration Test                   | MIL-STD-202 Method 204                 | 1.Frequency and Amplitued :<br>10-2000-10 Hz, 1.5 mm.<br>2.Direction:X, Y, Z<br>3.Test duration:2 hours for each direction,<br>6 hours in total.                   | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 9.Resistance To Soldering Heat Test | MIL-STD-202 Method 210 & J-STD020D.1   | 1.Highest temperature : 260±5°C.<br>2.Time ( temp.≥ 217°C ) : 60~150 Second.<br>3.IR reflow times : 3 times.   | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 10.Saturation Current               | JIS C 6436 & User SPEC.                | 1.Applied rated current for 5 second.<br>2.Saturation current  | Inductance shall not drop more than 10% max.  |
| 11.Over load                        | JIS C 6436 & User SPEC.                | 1.Applied one and half rated current for a period of 5 minutes.<br>2.Rated current   | No electrical or mechanical damage  |
| 12.Temperature Rise Current         | JIS C 6436 & User SPEC.                | 1.Applied rated current for 10 minutes.<br>2.Temperature measure by digital surface thermometer.<br>3.Irms current   | Surface temperature rise is less than 20°C max.   |
| 13.Solderability Test               | J-STD-002 & JESD22-B 102               | 1.Baking in pre-testing :<br>150±5°C / 16Hours±30 min.<br>2.Peak temperature : 240±5°C<br>3.Time ( temp.≥ 217°C ) : 60~150 second.<br>4.IR reflow times : 1 times. | More than 95% soldering coverage min on terminations.   |
| 14.Electrical Characterization      | MIL-STD-202 Method 304 & User SPEC.    | 1.Operating temperature : -40°C~125°C<br>2.Room temperature : 25°C.  | 1.No mechanical or electrical damage.<br>2.Inductance shall not change more than ±10%.                    |
| 15.Drop                             | CNS-C6354 & GB/T 2423.8                | 1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m<br>2.Drop total time : 6 time<br>(Every side of sample drop 2 time)                  | 1. Adhesion on PCB shall be enough.<br>2. Product appearance shall not break.<br>3. No electrical damage. |
| 16.Terminal Strength Test           | IEC 60068-2-21                         | 1.Apply push force to samples mounted on PCB.<br>2.Force of 1.8 kg for 60±1 seconds.   | After test, inductors shall be no mechanical damage.  |

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