

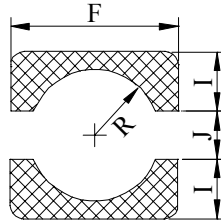
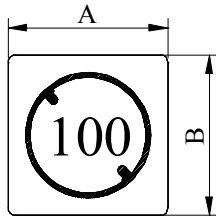
SPECIFICATION FOR APPROVAL

REF :

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| | | | |
|---------------|--------------------------------|---------------------------------|------------------|
| PROD. NAME | SHIELDED SMD POWER INDUCTOR | ABC'S DWG NO. ABC'S ITEM NO. | SH4009□□□□L□-□□□ |
|---------------|--------------------------------|---------------------------------|------------------|

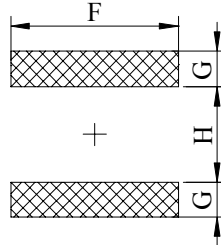
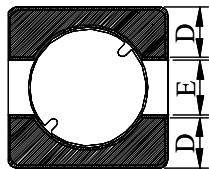
. CONFIGURATION & DIMENSIONS :



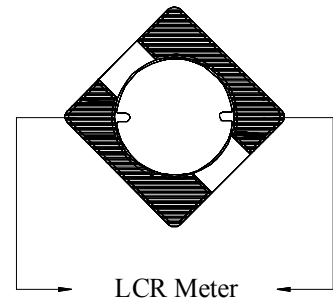
| | | |
|---|--------------|-----|
| A | : 4.20 ±0.30 | m/m |
| B | : 4.20 ±0.30 | m/m |
| C | : 0.90 ±0.15 | m/m |
| D | : 1.40 typ. | m/m |
| E | : 1.20 typ. | m/m |
| F | : 4.50 ref. | m/m |
| G | : 0.90 ref. | m/m |
| H | : 2.90 ref. | m/m |
| I | : 1.65 ref. | m/m |
| J | : 1.20 ref. | m/m |
| R | : 1.50 ref. | m/m |



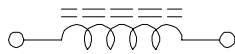
OR



(PCB Pattern Suggestion)

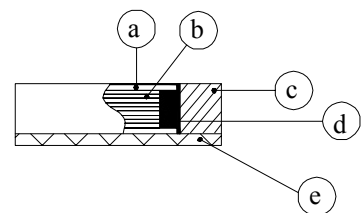


. SCHEMATIC DIAGRAM :

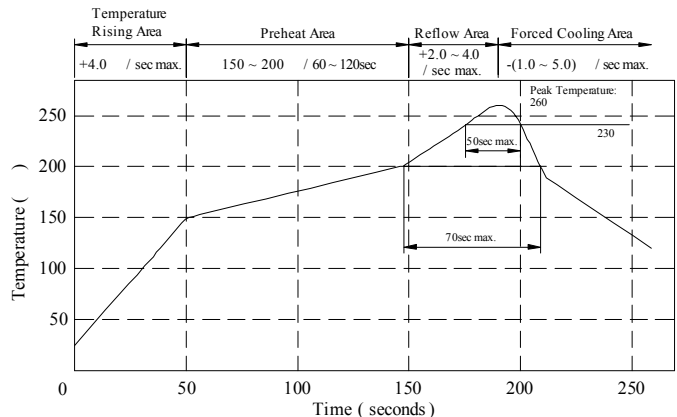


. MATERIALS :

- a . Core : Ferrite DR core
- b . Core : Ferrite RI core
- c . Wire : Enamelled copper wire (Class H)
- d . Adhesive : Epoxy resin
- e . Terminal : Ag / Ni / Sn
- f . Remark : Products comply with RoHS' requirements



Peak Temp : 260 max.
 Max time above 230 : 50sec max.
 Max time above 200 : 70sec max.



. GENERAL SPECIFICATION :

- a . Temp. rise : 40 typ.
- b . Storage temp. : -40 ----+125
- c . Operating temp. : -40 ----+105
- d . Resistance to solder heat : 260 .10 secs.

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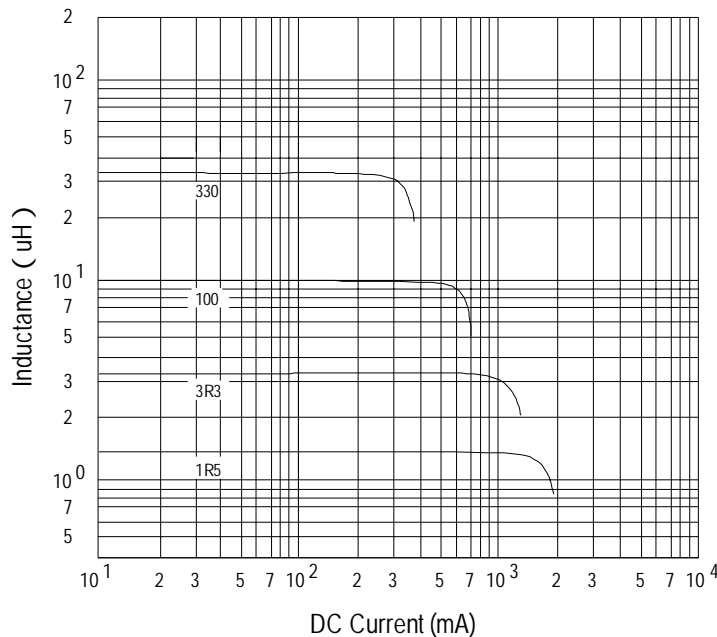
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| PROD. NAME | SHIELDED SMD POWER INDUCTOR | ABC'S DWG NO. | SH4009□□□□L□-□□□ |
| | | ABC'S ITEM NO. | |

. ELECTRICAL CHARACTERISTICS :

| DWG No. | Inductance (μH) | Q ref. | Test Freq. (MHz) | SRF (MHz) typ. | RDC (mΩ) | | Irms (mA) typ. | Isat (mA) typ. |
|------------------|-----------------|--------|------------------|----------------|----------|------|----------------|----------------|
| | | | | | typ. | max. | | |
| SH40091R1YL□-□□□ | 1.10 ± 30 % | 10 | 7.96 | 150 | 58 | 76 | 2100 | 2000 |
| SH40091R5YL□-□□□ | 1.50 ± 30 % | 10 | 7.96 | 120 | 75 | 98 | 1700 | 1650 |
| SH40092R5YL□-□□□ | 2.50 ± 30 % | 8 | 7.96 | 100 | 130 | 170 | 1350 | 1300 |
| SH40093R3YL□-□□□ | 3.30 ± 30 % | 8 | 7.96 | 85 | 160 | 210 | 1200 | 1150 |
| SH40094R7YL□-□□□ | 4.70 ± 30 % | 10 | 7.96 | 65 | 230 | 300 | 920 | 900 |
| SH40096R8YL□-□□□ | 6.80 ± 30 % | 8 | 7.96 | 55 | 320 | 415 | 750 | 750 |
| SH40098R0YL□-□□□ | 8.00 ± 30 % | 8 | 7.96 | 50 | 370 | 480 | 680 | 680 |
| SH4009100YL□-□□□ | 10.00 ± 30 % | 16 | 2.52 | 42 | 530 | 700 | 600 | 650 |
| SH4009150YL□-□□□ | 15.00 ± 30 % | 16 | 2.52 | 34 | 710 | 925 | 450 | 480 |
| SH4009220YL□-□□□ | 22.00 ± 30 % | 12 | 2.52 | 26 | 920 | 1200 | 400 | 420 |
| SH4009330YL□-□□□ | 33.00 ± 30 % | 14 | 2.52 | 20 | 1450 | 1900 | 320 | 340 |

- 1). □: Packaging Information... **A**: Bulk **B**: Taping Reel
- 2). "-□□□": Reference code
- 3). Inductance Test Freq. : 100KHz /0.1V
- 4). Irms base on Temp. rise 40 typ.
- 5). Isat base on L / LOA=35% typ.

@ Inductance VS. DC Current Curve



SPECIFICATION FOR APPROVAL

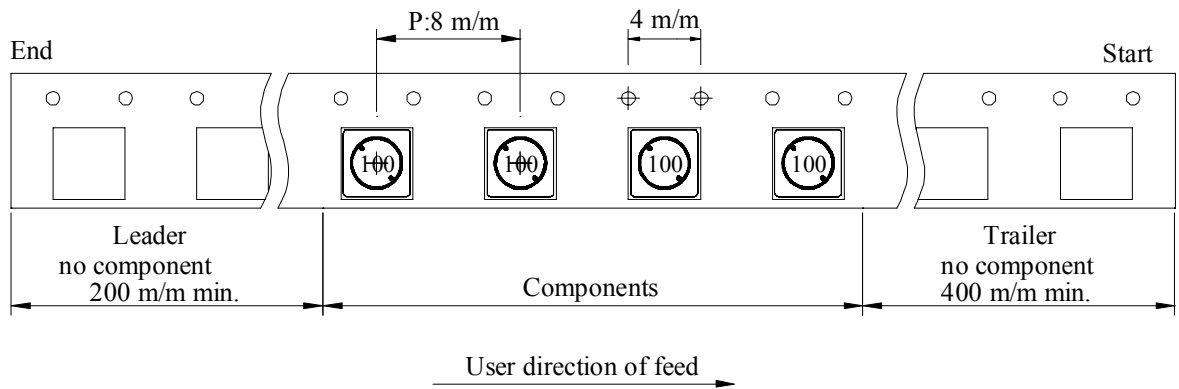
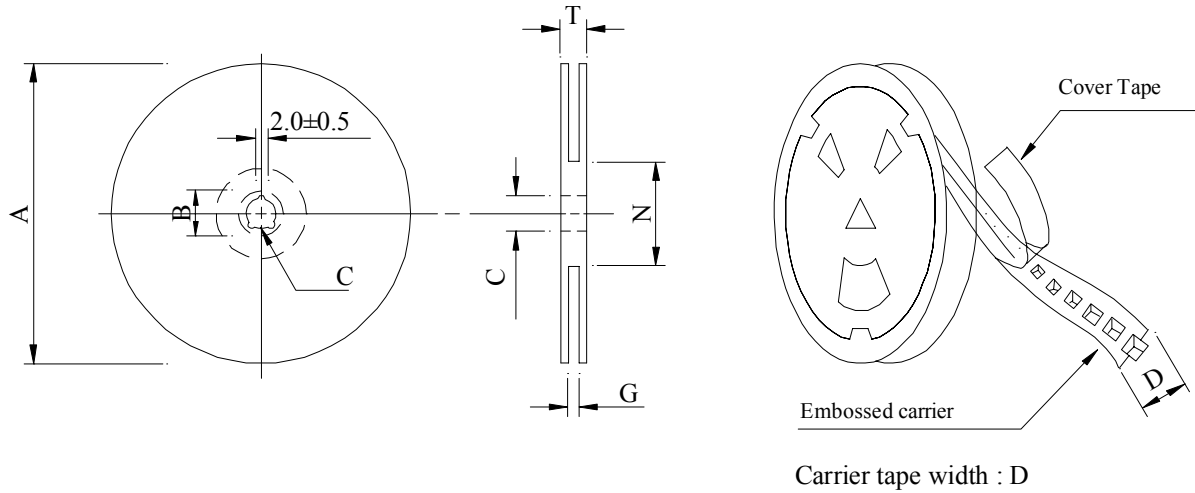
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| | | ABC'S ITEM NO. | |

PACKAGING INFORMATION :

(1) Configuration



(2) Dimensions

Unit:m/m

| Style | A | B | C | D | G | N | T |
|---------|-----|--------|----|----|------------------|------------------|------|
| 07 - 12 | 178 | 21±0.8 | 13 | 12 | 14 ⁺⁰ | 50 ⁻⁰ | 16.5 |

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

| Series | Inner : Reel | | | Outer : Carton | | |
|--------|--------------|-----------|---------|----------------|-----------|--------------|
| | Q'TY (pcs) | G.W. (gw) | Style | Q'TY (pcs) | G.W. (Kg) | Size (cm) |
| SH4009 | 1,500 | 168 | 07 - 12 | 60,000 | 7.7 | 42 x 41 x 24 |

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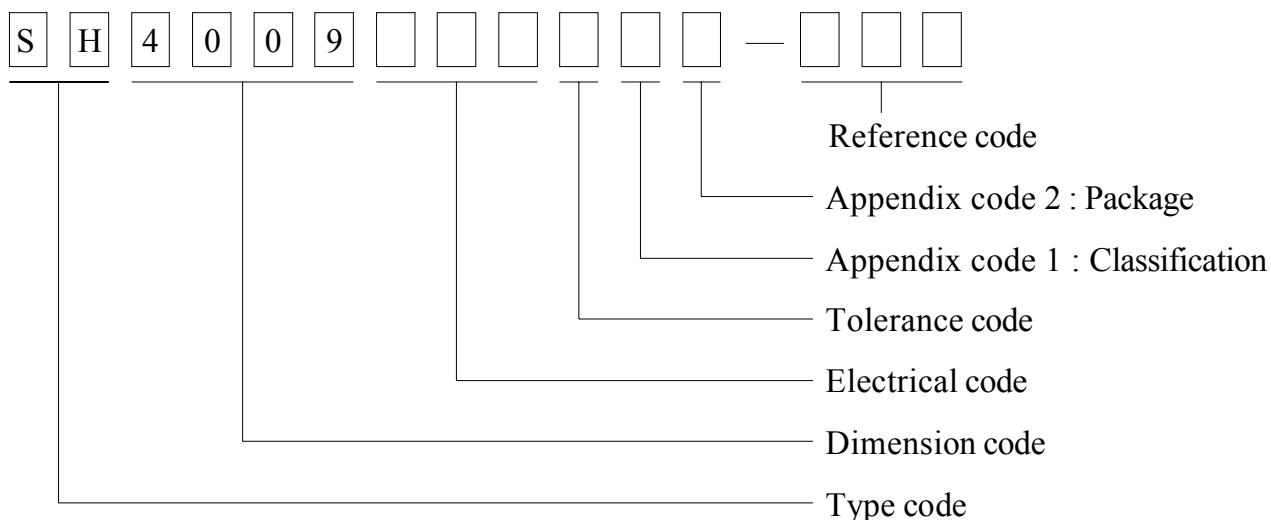
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| | | ABC'S ITEM NO. | |

. DWGING NUMBER EXPRESSION :



Appendix code 1 : Product Classification

- L : Lead Free Standard products comply with RoHS' requirements
- 1 ~ 9 : Lead Free Special products comply with RoHS' requirements

Appendix code 2 : Package Information

| Code | Inner package | Inner package Q'TY | Remark |
|------|------------------------|--------------------|--------|
| A | T.B.D. | T.B.D. | |
| B | T / R (Reel package) | 1,500 pcs | |

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|---------------|--------------------------------|---------------------------------|------------------|

RELIABILITY TEST :

| Test item | Specification | Test condition | | | | | | |
|---------------------------------------|---|---|--------------------------|---|---------------------|--------------------------|---|--------------------|
| Solderability | More than 90% of the terminal electrode shall be covered With fresh solder. | Preheat : 150±25 for 60 seconds Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5 Flux : Rosin Dip time : 4±1 seconds | | | | | | |
| Thermal shock test (Temp. cycle) | Inductance shall not change more than ±20% | <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">-25±2 30 minutes</td> </tr> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">85±2 30 minutes</td> </tr> </table> <p>Total : 50 cycles</p> | Room temp. 15 minutes | → | -25±2 30 minutes | Room temp. 15 minutes | → | 85±2 30 minutes |
| Room temp. 15 minutes | → | -25±2 30 minutes | | | | | | |
| Room temp. 15 minutes | → | 85±2 30 minutes | | | | | | |
| Humidity Resistance test | | Temperature : 40±2 Humidity : 90 ~ 95% Applied current : Per spec. Time : 500 hours | | | | | | |
| High temp. Resistance test | | Temperature : 105±2 Applied current : Per spec. Time : 500 hours | | | | | | |

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|---------------|--------------------------------|---------------------------------|------------------|

UL CARD :

OBMW2 August 27, 1999

Magnet Wire-Component

ELEKTRISOLA (MALAYSIA) SDN BHD E143312
 IALAN DAMN SATU IANDA BAIK 28750 BENTONG, PAHANG
 DARUL MAKMUR MALAYSIA

| Mtl Dsg | Mark Dsg | Coating Type | | ANSI Typ | Temp Class |
|---------------|--------------|-----------------------------|-------|------------------|-------------|
| | | BC | OC | | |
| Estersol 160 | E180 | Polyesterimide (solderable) | — | MW-77 | 180 |
| Amldester 200 | A200 | Polyesterimide | — | MW-74 | 200 |
| Polysol-N 155 | PN155 | Polyurethane | Nylon | MW-80, MW-28 | 155, 100 |
| Polysol 155 | P155 | Polyurethane | — | MW-79, MW-79' | 155, 130 |
| Polysol 155g | Pg155 | Polyurethane | — | MW-79 | 130 |
| Polysol 155p | Pp155,Gp155 | Polyurethane | — | MW-79 | 155 |
| Polysol 160 | P160 | Polyurethane | — | MW-79 | 155 |
| Polysol 180 | P180 | Polyurethane | — | MW-79 | 155 |
| Polysol 170 | P170 or G170 | Polyurethane | — | MW-79 | 156 |
| Polysol-N 180 | PN180 | Polyurethane | Nylon | — | 180 |

Marking : Company name/material designation or marked designation and factory identification on package ok reel

See General Information preceding These Recognitions

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

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