

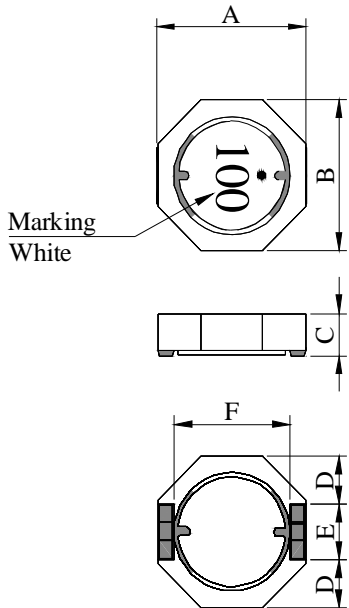
SPECIFICATION FOR APPROVAL

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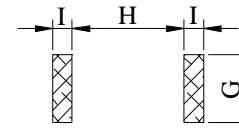
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| | | | |
|------------|--------------------------------|----------------|------------------|
| PROD. NAME | SHIELDED SMD POWER INDUCTOR | ABC'S DWG NO. | SU1038□□□□F□-□□□ |
| | | ABC'S ITEM NO. | |

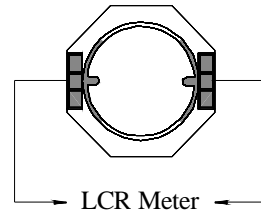
I . CONFIGURATION & DIMENSIONS :



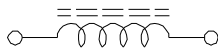
- A : 10.0 ±0.3 m/m
- B : 10.0 ±0.3 m/m
- C : 3.8 ±0.3 m/m
- D : 3.4 typ. m/m
- E : 3.2 typ. m/m
- F : 7.4 typ. m/m
- G : 4.0 ref. m/m
- H : 7.2 ref. m/m
- I : 1.8 ref. m/m



(PCB Pattern suggestion)

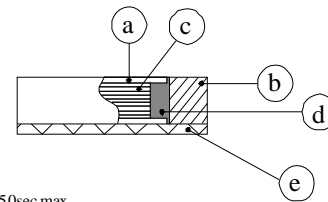


II . SCHEMATIC DIAGRAM :

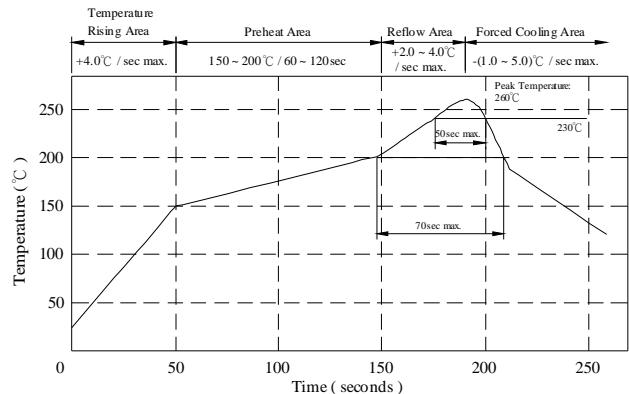


III . MATERIALS :

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



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



IV . GENERAL SPECIFICATION :

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

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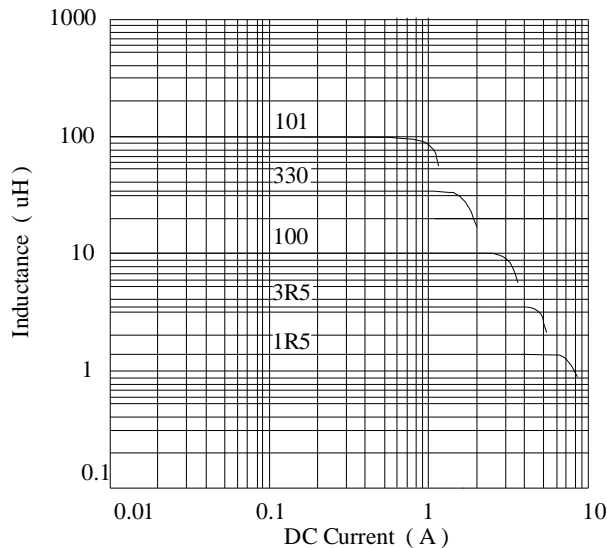
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V . ELECTRICAL CHARACTERISTICS :

| DWG No. | Inductance (μ H) | Q ref. | SRF (MHz) typ. | RDC (m Ω) | | I _{rms} (A) max. | I _{sat} (A) typ. |
|------------------|--------------------------|-----------|----------------------|----------------------|--------|---------------------------------|---------------------------------|
| | | | | typ. | max. | | |
| SU10381R5YF□-□□□ | 1.5 ± 30 % | 14 | 65 | 5.2 | 7.5 | 7.20 | 7.00 |
| SU10382R2YF□-□□□ | 2.2 ± 30 % | 12 | 55 | 7.7 | 10.5 | 6.80 | 6.50 |
| SU10383R5YF□-□□□ | 3.5 ± 30 % | 14 | 35 | 11.5 | 15.0 | 5.50 | 5.50 |
| SU10385R0YF□-□□□ | 5.0 ± 30 % | 12 | 30 | 14.5 | 22.0 | 4.60 | 4.80 |
| SU10386R2YF□-□□□ | 6.2 ± 30 % | 12 | 25 | 16.5 | 24.0 | 4.00 | 4.20 |
| SU1038100YF□-□□□ | 10.0 ± 30 % | 24 | 20 | 25.0 | 35.0 | 3.80 | 3.60 |
| SU1038150YF□-□□□ | 15.0 ± 30 % | 24 | 16 | 37.0 | 50.0 | 2.80 | 2.70 |
| SU1038220YF□-□□□ | 22.0 ± 30 % | 20 | 12 | 55.8 | 75.0 | 2.20 | 2.30 |
| SU1038330YF□-□□□ | 33.0 ± 30 % | 22 | 10 | 86.0 | 112.0 | 1.80 | 1.80 |
| SU1038470YF□-□□□ | 47.0 ± 30 % | 22 | 8 | 121.0 | 160.0 | 1.65 | 1.60 |
| SU1038680YF□-□□□ | 68.0 ± 30 % | 24 | 7 | 166.0 | 216.0 | 1.10 | 1.30 |
| SU1038101YF□-□□□ | 100.0 ± 30 % | 24 | 6 | 220.0 | 300.0 | 1.30 | 1.10 |
| SU1038151YF□-□□□ | 150.0 ± 30 % | 20 | 5 | 358.0 | 476.0 | 0.90 | 0.80 |
| SU1038221YF□-□□□ | 220.0 ± 30 % | 22 | 4 | 565.0 | 740.0 | 0.65 | 0.65 |
| SU1038331YF□-□□□ | 330.0 ± 30 % | 20 | 3 | 773.0 | 1000.0 | 0.55 | 0.52 |

- 1) . □ : Packaging Information... **A** : Bulk **B** : Taping Reel
- 2) ."- □□□":Reference code
- 3) . Inductance Test Freq. : 100KHz / 1V
- 4) . Q Test Freq. : 1R5~6R2--7.96MHz , 100~680--2.52MHz , 101~331--0.796MHz
- 5) . Isat base on $\Delta L / LOA=35\%$ typ.
- 6) . I_{rms} base on Temp. rise 40°C max.

@ Inductance VS. DC Superposition Characteristics



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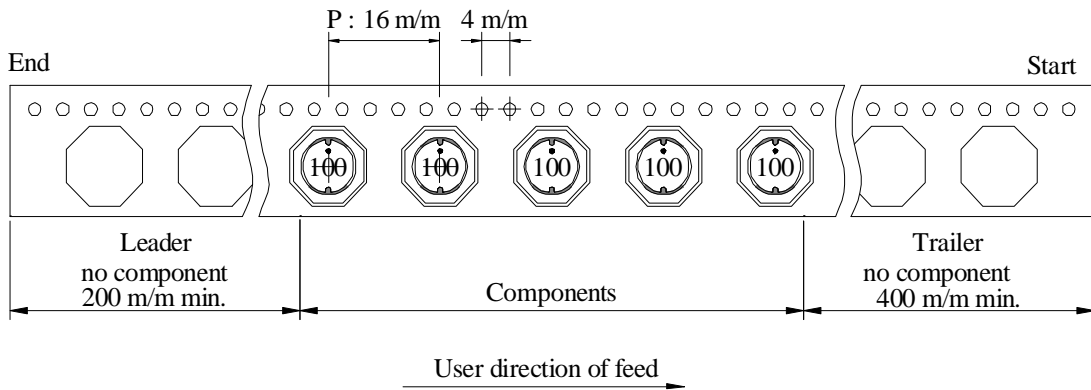
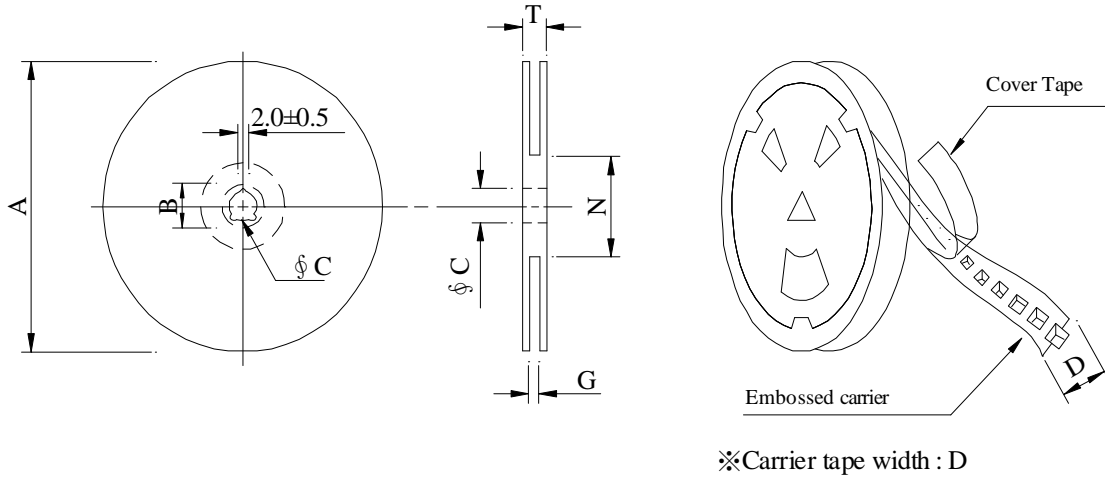
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VI . PACKAGING INFORMATION :

(1) Configuration



(2) Dimensions

Unit:m/m

| Style | A | B | C | D | G | N | T |
|---------|-----|--------|--------|----|------------------|------------------|------|
| 13 - 24 | 330 | 21±0.8 | 13±0.5 | 24 | 26 ⁺⁰ | 50 ⁻⁰ | 30.4 |

(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) |
| SU1038 | 800 | 1100 | 13 - 24 | 3,200 | 5.0 | 40 x 40 x 24 |
| SU1038 | 1,000 | 1380 | 13 - 24 | 4,000 | 6.25 | 40 x 40 x 24 |

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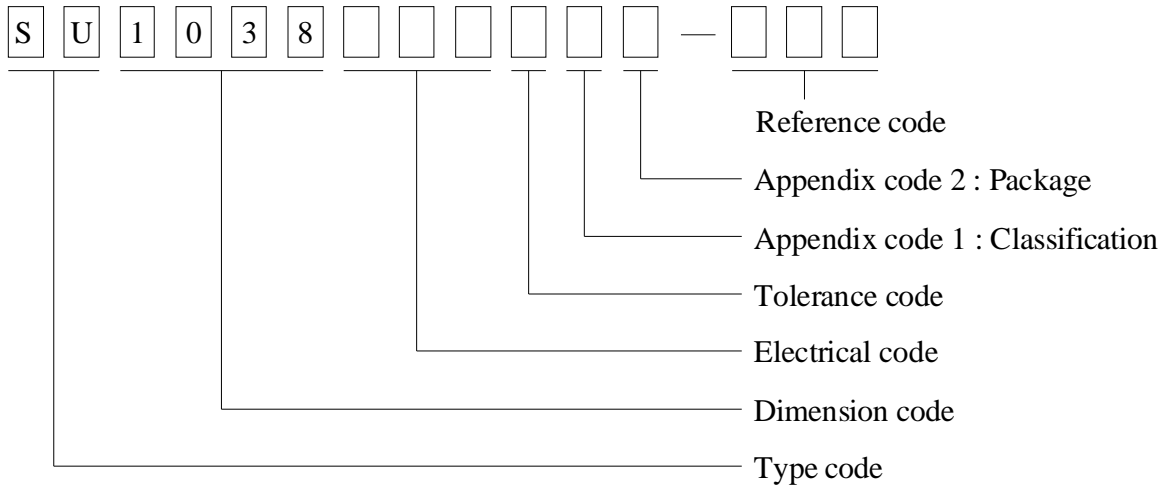
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VII . DWGING NUMBER EXPRESSION :



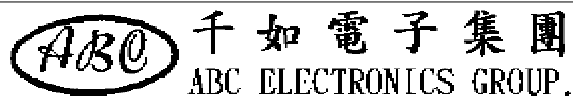
Appendix code 1 : Product Classification

- F : 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 QTY | Remark |
|------|------------------------|-------------------|--------|
| A | T.B.D. | T.B.D. | |
| B | T / R (Reel package) | 800 pcs | |
| C | T / R (Reel package) | 1000 pcs | |

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| | | ABC'S ITEM NO. | |

VIII . RELIABILITY TEST :

| Test item | Specification | Test condition | | | | | | |
|---------------------------------------|---|---|--------------------------|---|----------------------|--------------------------|---|-----------------------|
| Solderability | More than 95% of the terminal electrode shall be covered With fresh solder. | Preheat : 155°C / 4 hours. Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5°C Flux : Rosin Dip time : 5±0.5 seconds | | | | | | |
| Thermal shock test (Temp. cycle) | Electrical oharacteristics 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;">-40 °C 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;">+105 °C 30 minutes</td> </tr> </table> <p>Total : 50 cycles</p> | Room temp. 15 minutes | → | -40 °C 30 minutes | Room temp. 15 minutes | → | +105 °C 30 minutes |
| Room temp. 15 minutes | | → | -40 °C 30 minutes | | | | | |
| Room temp. 15 minutes | | → | +105 °C 30 minutes | | | | | |
| Humidity test | | Temperature : 40±2°C Humidity : 90±5% Time : 1000 hours | | | | | | |
| High temp. Resistance test | Temperature : 105±5°C Applied current : Per spec. Time : 96 hours | | | | | | | |

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OBMW2 August 27, 1999

Magnet Wire-Component

ELEKTRISOLA (MALAYSLA) 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.