

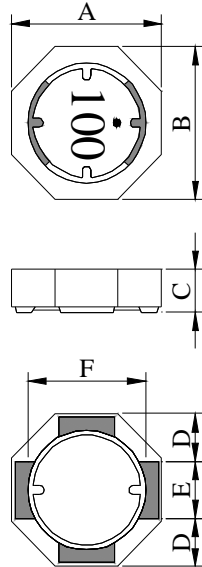
# SPECIFICATION FOR APPROVAL

REF :20091008-B

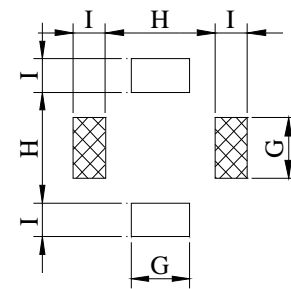
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|            |                                |                |                  |
|------------|--------------------------------|----------------|------------------|
| PROD. NAME | SHIELDED SMD<br>POWER INDUCTOR | ABC'S DWG NO.  | SU5028□□□□2□-□□□ |
|            |                                | ABC'S ITEM NO. |                  |

## I . CONFIGURATION & DIMENSIONS :

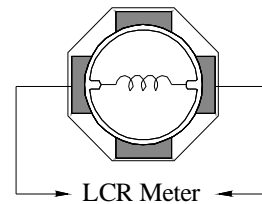
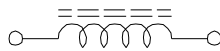


- A : 5.20 ±0.20 m/m
- B : 5.20 ±0.20 m/m
- C : 2.80 ±0.20 m/m
- D : 1.70 typ. m/m
- E : 1.80 typ. m/m
- F : 3.90 typ. m/m
- G : 2.00 ref. m/m
- H : 3.70 ref. m/m
- I : 1.10 ref. m/m



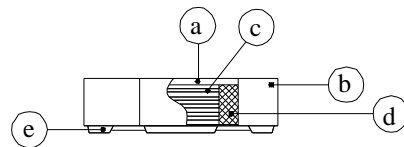
( PCB Pattern Suggestion )

## 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'

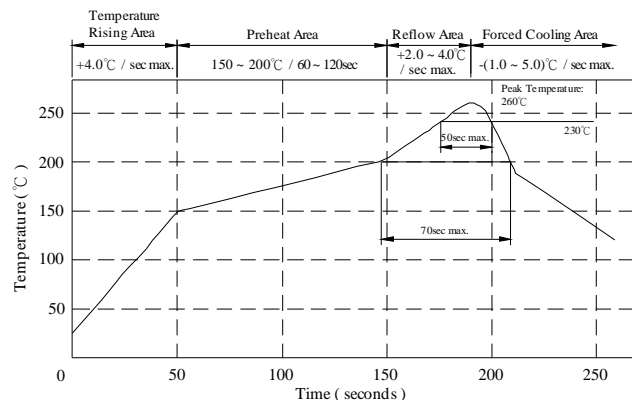


requirements

## IV . GENERAL SPECIFICATION :

- a . Temp. rise : 40°C typ.
- b . Rated current :  
Base on temp. rise &  $\Delta L / L0A=35\%$  typ.
- c . Storage temp. : -40°C ----+125°C
- d . Operating temp. : -40°C ----+105°C
- e . Resistance to solder heat : 260°C.10 secs.

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



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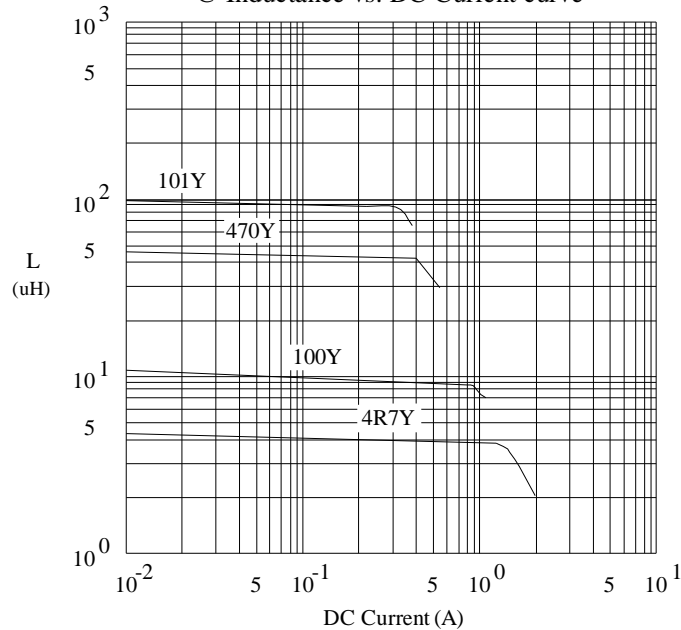
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|            |                                | ABC'S ITEM NO. |                  |

**V . ELECTRICAL CHARACTERISTICS :**

| DWG No.          | Inductance<br>( $\mu$ H) | Q<br>ref. | Test Freq.<br>( Hz ) |       | RDC<br>( m $\Omega$ ) |        | SRF<br>( MHz )<br>typ. | Irms<br>( mA )<br>typ. | Isat<br>( mA )<br>typ. |
|------------------|--------------------------|-----------|----------------------|-------|-----------------------|--------|------------------------|------------------------|------------------------|
|                  |                          |           | L                    | Q     | typ.                  | max.   |                        |                        |                        |
| SU50284R7Y2□-□□□ | 4.7 $\pm$ 30 %           | 8.0       | 100K                 | 7.96M | 24.0                  | 35.0   | 70                     | 2500                   | 1500                   |
| SU50286R8Y2□-□□□ | 6.8 $\pm$ 30 %           | 7.2       | 100K                 | 7.96M | 28.0                  | 38.0   | 45                     | 2200                   | 1200                   |
| SU5028100Y2□-□□□ | 10.0 $\pm$ 30 %          | 10.5      | 100K                 | 2.52M | 46.5                  | 60.0   | 35                     | 1800                   | 950                    |
| SU5028150Y2□-□□□ | 15.0 $\pm$ 30 %          | 20.0      | 100K                 | 2.52M | 63.0                  | 82.0   | 30                     | 1500                   | 800                    |
| SU5028220Y2□-□□□ | 22.0 $\pm$ 30 %          | 17.0      | 100K                 | 2.52M | 105.0                 | 132.0  | 20                     | 1150                   | 680                    |
| SU5028330Y2□-□□□ | 33.0 $\pm$ 30 %          | 18.0      | 100K                 | 2.52M | 150.0                 | 195.0  | 15                     | 960                    | 600                    |
| SU5028470Y2□-□□□ | 47.0 $\pm$ 30 %          | 13.0      | 100K                 | 2.52M | 195.0                 | 250.0  | 14                     | 830                    | 450                    |
| SU5028680Y2□-□□□ | 68.0 $\pm$ 30 %          | 12.0      | 100K                 | 2.52M | 260.0                 | 340.0  | 10                     | 750                    | 330                    |
| SU5028101Y2□-□□□ | 100.0 $\pm$ 30 %         | 35.0      | 100K                 | 796K  | 425.0                 | 550.0  | 10                     | 520                    | 300                    |
| SU5028151Y2□-□□□ | 150.0 $\pm$ 30 %         | 45.0      | 100K                 | 796K  | 600.0                 | 750.0  | 8                      | 480                    | 280                    |
| SU5028221Y2□-□□□ | 220.0 $\pm$ 30 %         | 40.0      | 100K                 | 796K  | 870.0                 | 1085.0 | 6                      | 360                    | 240                    |

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

@ Inductance vs. DC Current curve



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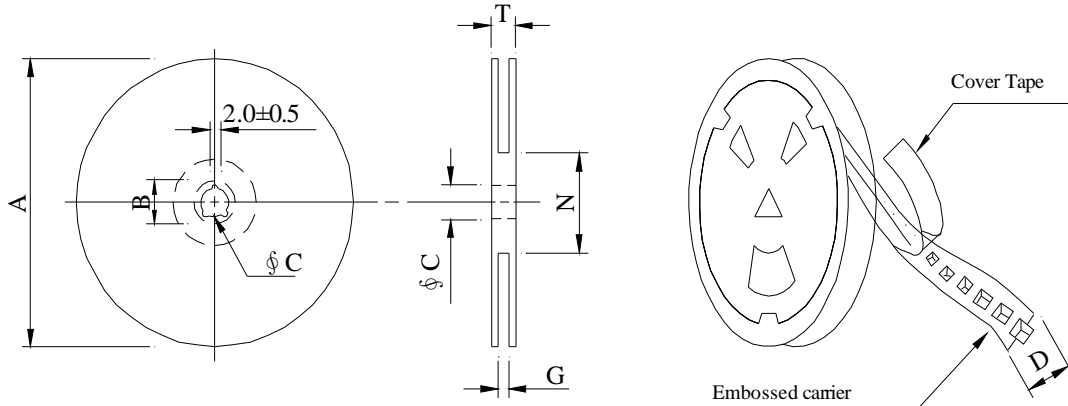
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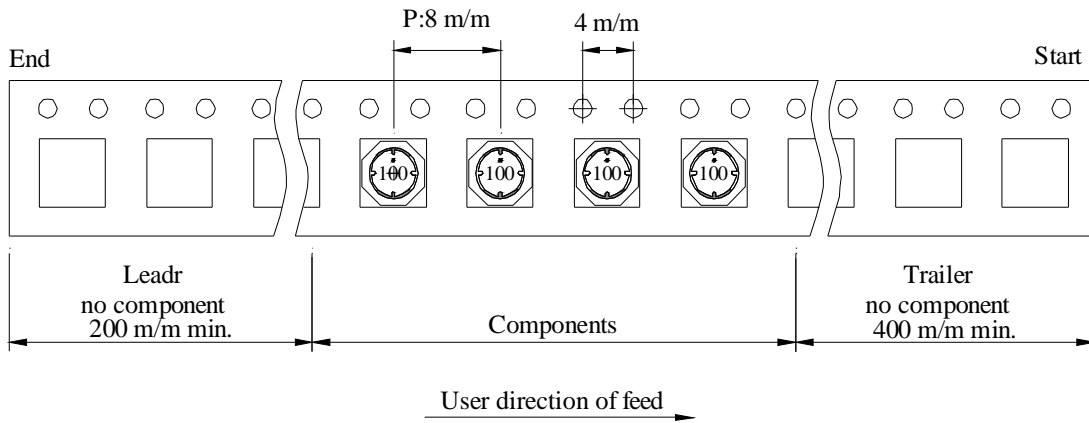
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|            |                                | ABC'S ITEM NO. |                  |

**VI . PACKAGING INFORMATION :**

( 1 ) Configuration



※Carrier tape width : D



( 2 ) Dimensions

Unit:m/m

| Style   | A   | B      | C  | D  | G                | N                | T    |
|---------|-----|--------|----|----|------------------|------------------|------|
| 07 - 12 | 178 | 21±0.8 | 13 | 12 | 14 <sup>+0</sup> | 50 <sup>-0</sup> | 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)    |
| SU5028 | 600          | 185       | 07 - 12 | 24,000         | 8.4       | 42 x 41 x 24 |

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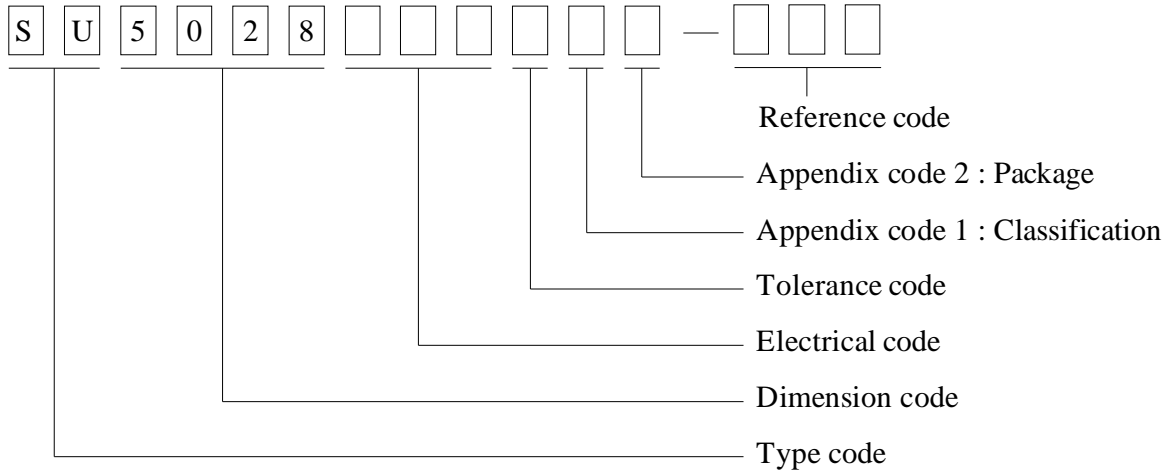
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|            |                                | ABC'S ITEM NO. |                  |

**VII . 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 QTY | Remark |
|------|------------------------|-------------------|--------|
| A    | T.B.D.                 | T.B.D.            |        |
| B    | T / R ( Reel package ) | 600 pcs           |        |

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**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.<br>Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent<br>Solder temp. : 235±5 °C<br>Flux : Rosin<br>Dip time : 5±0.5 seconds   |                          |   |                      |                          |   |                       |
| Thermal shock test<br>(Temp. cycle) | Electrical oharacteristics shall not change more than ±20%                  | <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Room temp.<br/>15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">-40 °C<br/>30 minutes</td> </tr> <tr> <td style="text-align: center;">Room temp.<br/>15 minutes</td> <td style="text-align: center;">→</td> <td style="text-align: center;">+105 °C<br/>30 minutes</td> </tr> </table> <p>Total : 50 cycles</p> | Room temp.<br>15 minutes | → | -40 °C<br>30 minutes | Room temp.<br>15 minutes | → | +105 °C<br>30 minutes |
| Room temp.<br>15 minutes            | →   | -40 °C<br>30 minutes  |                          |   |                      |                          |   |                       |
| Room temp.<br>15 minutes            | →   | +105 °C<br>30 minutes   |                          |   |                      |                          |   |                       |
| Humidity test                       |   | Temperature : 40±2 °C<br>Humidity : 90±5%<br>Time : 1000 hours  |                          |   |                      |                          |   |                       |
| High temp.<br>Resistance test       |   | Temperature : 105±5 °C<br>Applied current : Per spec.<br>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,   | 155,       |
|               |              |                             |       | MW-28    | 100        |
| Polysol 155   | P155         | Polyurethane                | —     | MW-79,   | 155,       |
|               |              |                             |       | MW-79    | 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 : Dompany name/nateriel designation or marked designation and factory identification on package ok reel

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See General Information preceding These Recognitions  
 For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.