

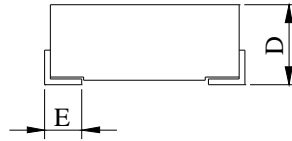
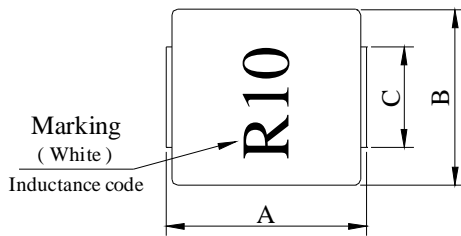
# SPECIFICATION FOR APPROVAL

REF : 20090825-B

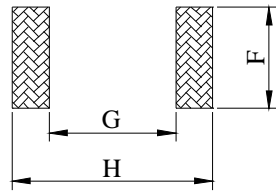
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|               |                                |                                 |                  |
|---------------|--------------------------------|---------------------------------|------------------|
| PROD.<br>NAME | SHIELDED SMD<br>POWER INDUCTOR | ABC'S DWG No.<br>ABC'S ITEM No. | HP0601□□□□2□-□□□ |
|---------------|--------------------------------|---------------------------------|------------------|

## I . MECHANICAL DIMENSIONS :

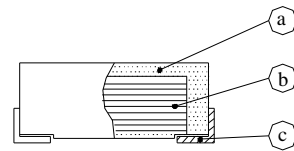
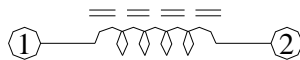


- A : 7.20 ± 0.3 m/m
- B : 6.50 ± 0.2 m/m
- C : 3.00 ± 0.3 m/m
- D : 1.80 max. m/m
- E : 1.70 ± 0.5 m/m
- F : 3.40 typ. m/m
- G : 3.70 typ. m/m
- H : 7.40 typ. m/m



( PCB Pattern )

## II . SCHEMATIC DIAGRAM :



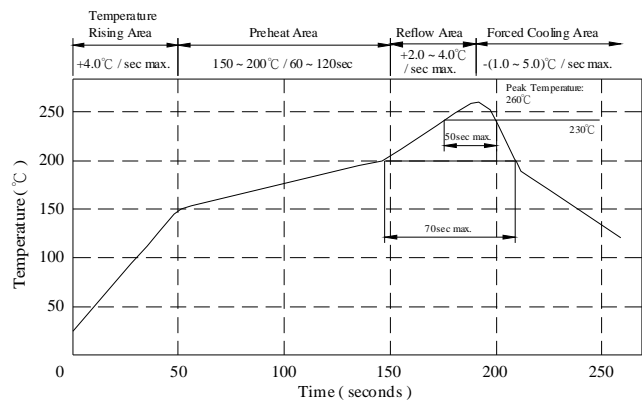
## III . MATERIALS LIST :

- a . Core : Iron powder
- b . Wire : Enamelled copper wire
- c . Cilp : Cu / Ni / Sn
- d . 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 . Storage temp. : -55°C ~ +125°C
- b . Operating temp. : -55°C ~ +125°C  
( Temp. rise included )
- c . Resistance to solder heat : 260°C . 10 secs.



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|       |                |                |                  |
|-------|----------------|----------------|------------------|
| PROD. | SHIELDED SMD   | ABC'S DWG No.  | HP0601□□□□2□-□□□ |
| NAME  | POWER INDUCTOR | ABC'S ITEM No. |                  |

### V . ELECTRICAL CHARACTERISTICS :

| DWG No.          | Inductance<br>L ( $\mu$ H ) | Isat<br>typ.<br>( A ) | Irms<br>typ.<br>( A ) | RDC<br>( $m\Omega$ ) |      |
|------------------|-----------------------------|-----------------------|-----------------------|----------------------|------|
|                  |                             |                       |                       | max.                 | typ. |
| HP0601R10M2□-□□□ | 0.10 $\pm$ 20 %             | 40.0                  | 18.0                  | 3.5                  | 3.0  |
| HP0601R15M2□-□□□ | 0.15 $\pm$ 20 %             | 38.0                  | 15.0                  | 5.5                  | 5.0  |
| HP0601R22M2□-□□□ | 0.22 $\pm$ 20 %             | 26.0                  | 14.0                  | 6.0                  | 5.5  |
| HP0601R33M2□-□□□ | 0.33 $\pm$ 20 %             | 18.0                  | 12.0                  | 7.0                  | 6.5  |
| HP0601R47M2□-□□□ | 0.47 $\pm$ 20 %             | 18.0                  | 11.0                  | 9.5                  | 8.5  |
| HP0601R68M2□-□□□ | 0.68 $\pm$ 20 %             | 17.0                  | 9.0                   | 14.0                 | 13.0 |
| HP0601R82M2□-□□□ | 0.82 $\pm$ 20 %             | 17.0                  | 8.0                   | 16.0                 | 14.0 |
| HP06011R0M2□-□□□ | 1.00 $\pm$ 20 %             | 14.0                  | 7.0                   | 18.5                 | 17.5 |
| HP06011R5M2□-□□□ | 1.50 $\pm$ 20 %             | 11.0                  | 4.0                   | 34.0                 | 33.0 |
| HP06012R2M2□-□□□ | 2.20 $\pm$ 20 %             | 13.0                  | 3.7                   | 46.0                 | 40.5 |
| HP06012R7M2□-□□□ | 2.70 $\pm$ 20 %             | 10.0                  | 3.5                   | 52.5                 | 50.0 |
| HP06013R3M2□-□□□ | 3.30 $\pm$ 20 %             | 10.0                  | 3.2                   | 60.5                 | 56.5 |
| HP06014R7M2□-□□□ | 4.70 $\pm$ 20 %             | 8.0                   | 3.0                   | 78.0                 | 77.0 |

- 1). □ : Packaging information ... **[A]**: Bulk **[B]**: Taping Reel
- 2). "- □□□ ":Reference code
- 3). Measured frequency of inductance is 100 KHz / 0.25V
- 4). Isat base on inductance drop 20% typ. of L value at 20°C
- 5). Irms base on temp. rise 40°C typ.

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# SPECIFICATION FOR APPROVAL

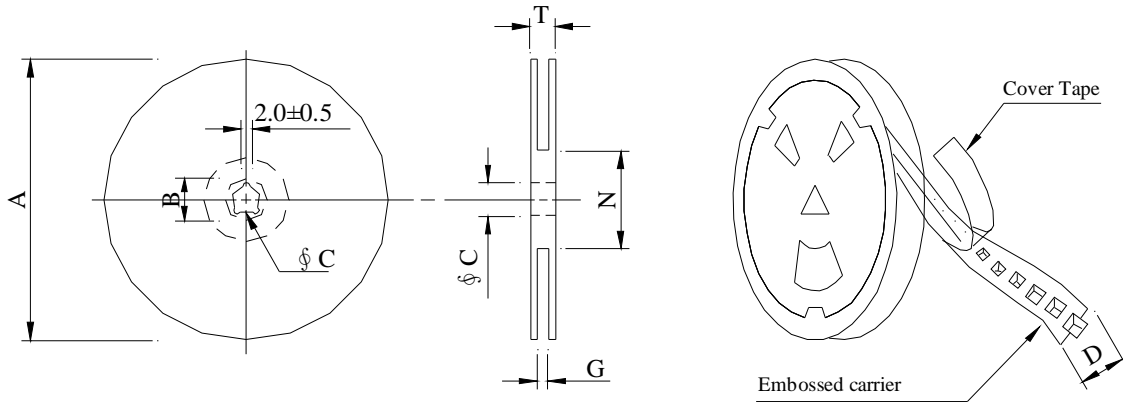
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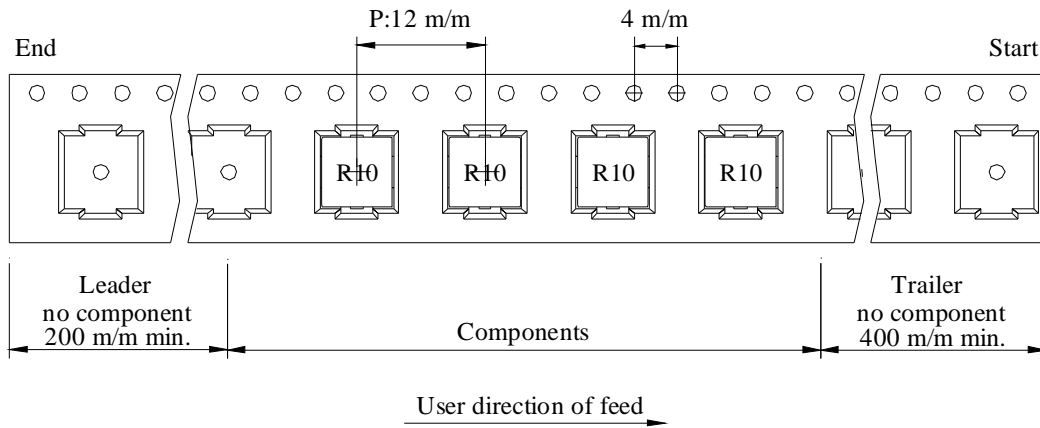
|            |                                |                |                  |
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|            |                                | ABC'S ITEM No. |                  |

## VI . PACKAGING INFORMATION :

( 1 ) Configuration



※Carrier tape width : D



( 2 ) Dimensions

Unit:m/m

| Style   | A   | B      | C      | D  | G                | N                | T    |
|---------|-----|--------|--------|----|------------------|------------------|------|
| 13 - 16 | 330 | 21±0.8 | 13±0.5 | 16 | 18 <sup>+0</sup> | 50 <sup>-0</sup> | 22.4 |

( 3 ) QTY & G.W. Per package

| Series | Inner : Reel |           |         | Outer : Carton |           |              |
|--------|--------------|-----------|---------|----------------|-----------|--------------|
|        | QTY (pcs)    | G.W. (gw) | Style   | QTY (pcs)      | G.W. (Kg) | Size (cm)    |
| HP0601 | 2,400        | 1,200     | 13 - 16 | 14,400         | 8.00      | 40 x 40 x 24 |

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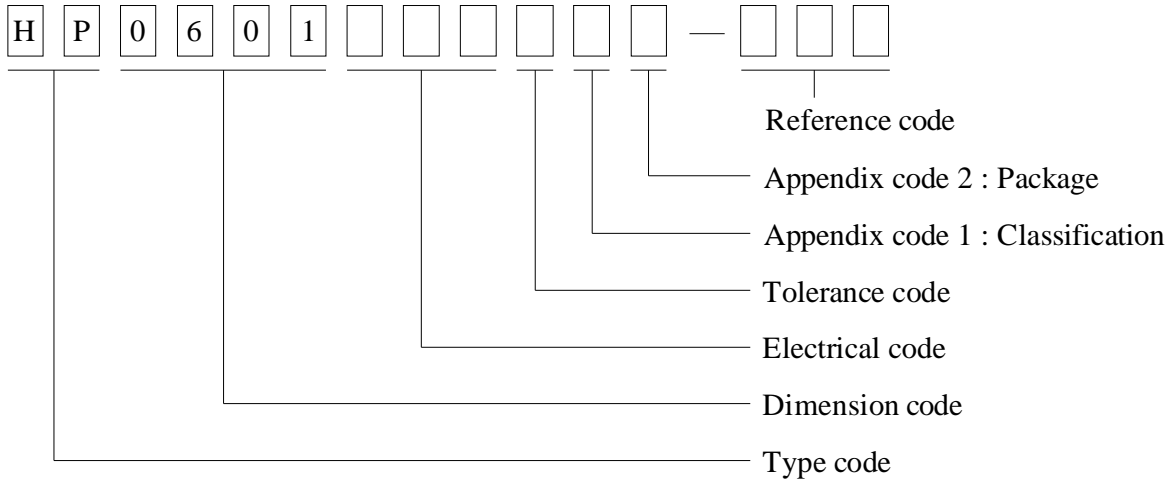
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|            |                                |                |                  |
|------------|--------------------------------|----------------|------------------|
| PROD. NAME | SHIELDED SMD<br>POWER INDUCTOR | ABC'S DWG No.  | HP0601□□□□2□-□□□ |
|            |                                | 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 Q'TY | Remark |
|------|------------------------|--------------------|--------|
| A    | T.B.D.                 | T.B.D              |        |
| B    | T / R ( Reel package ) | 2400 pcs           |        |

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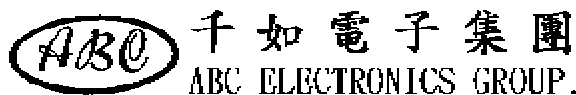
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|       |                |                |                  |
|-------|----------------|----------------|------------------|
| PROD. | SHIELDED SMD   | ABC'S DWG No.  | HP0601□□□□2□-□□□ |
| NAME  | POWER INDUCTOR | ABC'S ITEM No. |                  |

**VIII . RELIABILITY TEST :**

| Test item                             | Specification   | Test condition  |                          |   |                      |                          |   |                       |
|---------------------------------------|---|---|--------------------------|---|----------------------|--------------------------|---|-----------------------|
| Solderability                         | More than 95% of the terminal electrode shall be covered With fresh solder. | Preconditioning: 150°C/16Hrs±30min Dry Bake<br>Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent<br>Solder temp. :245±5°C<br>Flux : Rosin<br>Dip time: 5±0.5sec   |                          |   |                      |                          |   |                       |
| 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; border: none;">Room temp.<br/>15 minutes</td> <td style="text-align: center; border: none;">→</td> <td style="text-align: center; border: none;">-55 °C<br/>30 minutes</td> </tr> <tr> <td style="text-align: center; border: none;">Room temp.<br/>15 minutes</td> <td style="text-align: center; border: none;">→</td> <td style="text-align: center; border: none;">+125 °C<br/>30 minutes</td> </tr> </table> <p>Total : 50 cycles</p> | Room temp.<br>15 minutes | → | -55 °C<br>30 minutes | Room temp.<br>15 minutes | → | +125 °C<br>30 minutes |
| Room temp.<br>15 minutes              | →   | -55 °C<br>30 minutes  |                          |   |                      |                          |   |                       |
| Room temp.<br>15 minutes              | →   | +125 °C<br>30 minutes   |                          |   |                      |                          |   |                       |
| Humidity Test                         |   | Temperature : 40±2°C<br>Humidity : 90±5%<br>Time : 1000 hours   |                          |   |                      |                          |   |                       |
| High temp.<br>Resistance test         |   | Temperature : 125±5°C<br>Applied current : Per spec.<br>Time : 96 hours   |                          |   |                      |                          |   |                       |

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|                   |  |                       |                         |
|-------------------|--|-----------------------|-------------------------|
| <b>PROD. NAME</b> | <b>SHIELDED SMD<br/>POWER INDUCTOR</b> | <b>ABC'S DWG No.</b>  | <b>HP0601□□□□2□-□□□</b> |
|                   |  | <b>ABC'S ITEM No.</b> |                         |

**IX . UL CARD :**

**OBMW2** September 8, 2000  
**Magnet Wire-Component**

**JUNG SHING WIRE CO LTD** E174837  
 231 CHUNG CHENG RD, SEC 3 JEN-TEH HSIANG, TAINAN  
 HSIEN TAIWAN

| Mtl Dsg     | Mark Dsg | BC                    | Coat Typ           | OC  | ANSI Type | Temp Class |
|-------------|----------|-----------------------|--------------------|-----|-----------|------------|
| AIW         | ---      | Polyamideimide        | ---                | --- | MW81-C    | 220        |
| CFUEWB      | ---      | Polyurethane          | ---                | --- | MW75C     | 130        |
| EIAIW       | ---      | Polyesterimide        | Polyamideimide     | --- | MW35C     | 200        |
| EILOCKY     | ---      | Polyesterimide        | Polyamide          | --- | ---       | 180        |
| EILOCKW     | ---      | Polyesterimide        | Modified Epoxy     | --- | ---       | 200        |
| EIW         | ---      | Polyesterimide        | ---                | --- | ---       | 220        |
| EIW-2       | ---      | Polyesterimide        | ---                | --- | MW74-C    | 200        |
| FLEILOCKY   | ---      | Modified Polyester    | Polyamide          | --- | ---       | 155        |
| LSFFW       | ---      | Polyurethane          | ---                | --- | MW79-C    | 155        |
| LSUEW       | ---      | Polyurethane          | ---                | --- | ---       | 130        |
| PEW         | ---      | Polyester             | ---                | --- | ---       | 155        |
| PEY         | ---      | Polyester             | Nylon              | --- | MW24-C    | 155        |
| SF.FLW      | ---      | Modified Polyester    | ---                | --- | MW26C     | 155        |
| SF.EIW      | ---      | <b>Polyesterimide</b> | ---                | --- | MW77C     | 180        |
| SF.BY@      | ---      | Modified Polyester    | Nylon              | --- | MW27-C    | 155        |
| SF.FLY@     | ---      | Modified Polyester    | Nylon              | --- | MW27-C    | 155        |
| SF.BLOCKBS  | ---      | Modified Polyester    | Modified Polyamide | --- | ---       | 155        |
| SF.EILOCKY# | ---      | Polyesterimide        | Polyamide          | --- | ---       | 180        |
| SF.EILOCKBS | ---      | Polyesterimide        | Modified Polyamide | --- | ---       | 180        |
| SF.BW@      | ---      | Modified Polyester    | ---                | --- | MW26C     | 155        |
| SFFW        | ---      | Polyurethane          | ---                | --- | MW79      | 155        |

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| Mtl Dsg | Mark Dsg | BC           | Coat Typ  | OC  | ANSI Type | Temp Class |
|---------|----------|--------------|-----------|-----|-----------|------------|
| SFFY    | ---      | Polyurethane | Polyamide | --- | MW80C     | 155        |
| UEW-1   | ---      | Polyurethane | ---       | --- | MW2-C     | 105        |
| UEW-2   | ---      | Polyurethane | ---       | --- | ---       | 130        |
| UEW-4   | ---      | Polyurethane | ---       | --- | MW75C     | 130        |
| UEY     | ---      | Polyurethane | Nylon     | --- | MW28-C    | 130        |
| UEY-2   | ---      | Polyurethane | Polyamide | --- | MW28-C    | 130        |

@ - May be suffixed by LZ; # - May be suffixed by LZ, EL or LZI.  
 LZ - Signifies magned wires twisted together; EL - signifies base coated magnet wire laid parallel with top coat applied overall; LZL - signifies base coated magnet wire twisted together and covered with top coat overall.  
 Marking: Company name or trademarks JSW or 榮昌電線, material designation or marked designation on packaed or reel, and Recognized Component Mark.

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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September 8, 2000

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