

## SPECIFICATION FOR APPROVAL

**CUSTOMER'S APPROVAL CHOP**

Approval's Condition: \_\_\_\_\_

Approved Date: \_\_\_\_\_

KINDLY RETURN A SET WITH YOUR COMPANY'S OFFICIAL STAMP ON APPROVAL OF THIS ITEM

**CUSTOMER'S NAME:** \_\_\_\_\_

**CUSTOMER'S MODEL NO. :** \_\_\_\_\_

**CUSTOMER'S PART NO. :** \_\_\_\_\_

**DESCRIPTION:** \_\_\_\_\_ **EP10** \_\_\_\_\_

**Semitel'S MODEL NO. :** \_\_\_\_\_ **EP10-161** \_\_\_\_\_

**VERSION:** \_\_\_\_\_ **B** \_\_\_\_\_

**DATE:** \_\_\_\_\_ **2016-3-10** \_\_\_\_\_

**Attachments:**

- Product Specification
- Sample Qty. :
- Test Data

| Prepared By            | Checked By              | Approved By            |
|------------------------|-------------------------|------------------------|
| Hebe Deng<br>2016/3/10 | Liang Wang<br>2016/3/10 | Alan Wong<br>2016/3/10 |

|                             |                                                                            |
|-----------------------------|----------------------------------------------------------------------------|
| Semitel International Ltd., | TEL: 886-2-86922121      FAX: 886-2-26483379                               |
| www.semitelint.com          | 12F, No.183, Sec.1, Datong Rd., Xizhi Dist., New Taipei City 22145, Taiwan |

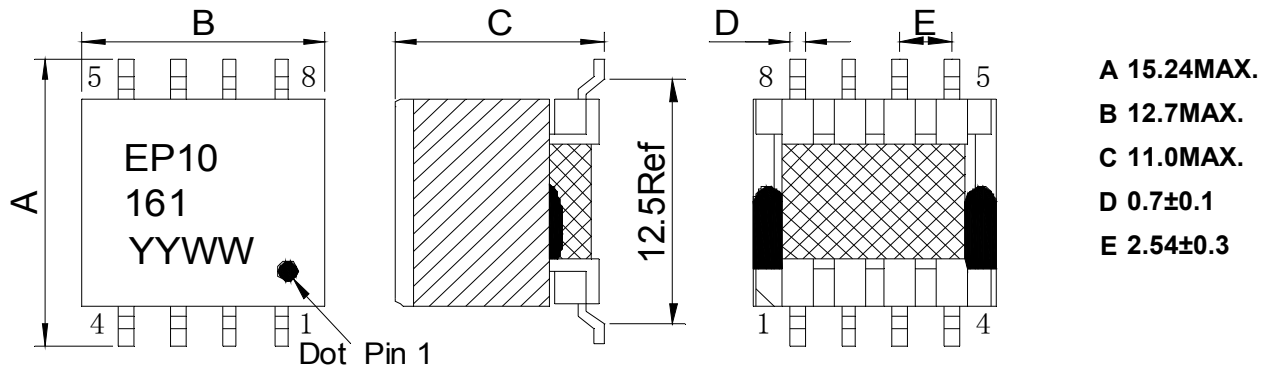
**Revision Record**

| Version | Revision Date | Revision For Items                                     | Revision For Items         |
|---------|---------------|--------------------------------------------------------|----------------------------|
| A       | 2015-11-17    | New Revision                                           | -                          |
| B       | 2016-3-10     | Marking changes from inkjet printing to laser printing | Change of marking printing |
|         |               |                                                        |                            |
|         |               |                                                        |                            |
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|-----------------------|-----------|------------------------|--|
| Semitel'S MODEL NO. : | EP10-161  | CUSTOMER'S MODEL NO. : |  |
| VERSION:              | B         | CUSTOMER'S PART NO. :  |  |
| DATE:                 | 2016-3-10 |                        |  |

# Product Specification

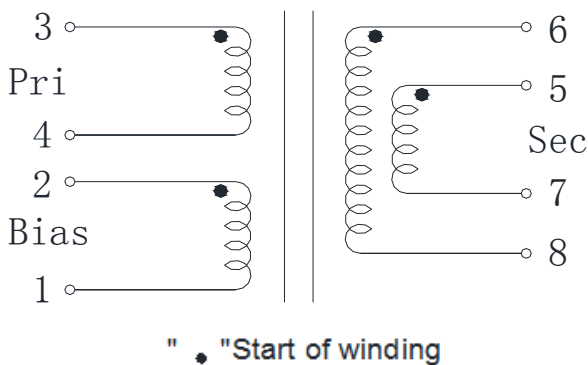
## 1. Physical Dimensions (Unit:mm)



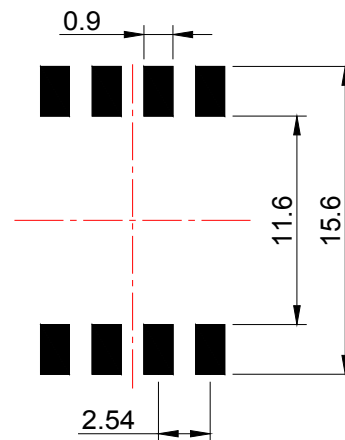
### Notes:

- \*Marking type is laser printing
- \*YY: Year Code; WW: Week Code
- \*Size A not including soldering tags
- \*Coplanarity Requirement: Less than 0.15mm

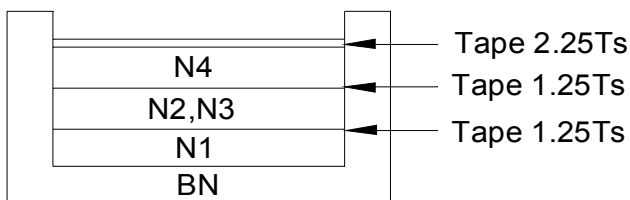
## 2. Connection



## 3. Recommended Pad Layout (Unit:mm)



## 4. Structure of Products



|                       |           |                        |  |
|-----------------------|-----------|------------------------|--|
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## Product Specification

### 5. Electrical Characteristics

\*RoHS Compliance Product

\*Operating temperature range: -40°C to +85°C .

| Items         | Winding              | Specifications | Test Conditions              |
|---------------|----------------------|----------------|------------------------------|
| Inductance    | L(3-4)               | 155uH±10%      | at 250KHz,0.1Vrms            |
| Inductance    | L(3-4)               | 139.5uH Min    | at 250KHz,0.1Vrms<br>@ 0.65A |
| LK-Inductance | LK(3-4)<br>tie other | 3.6uH Max      | at 250KHz,0.1Vrms            |
| DCR           | R(3-4)               | 0.414Ω Max     | at 25°C                      |
|               | R(2-1)               | 0.822Ω Max     |                              |
|               | R(5,6-7,8)           | 0.06Ω Max      |                              |
| Turns ratio   | Pri: Sec             | 1:0.262;±2%    | at 10KHz,2Vrms               |
|               | Pri: Bias            | 1:0.667;±2%    | at 10KHz,2Vrms               |
| Hi-Pot        | Pri. TO Sec.         | 1500VDC        | 0.5mA.60SEC.                 |
|               | Bias. TO Sec.        | 1500VDC        | 0.5mA.60SEC.                 |

### 6. Bill of Material

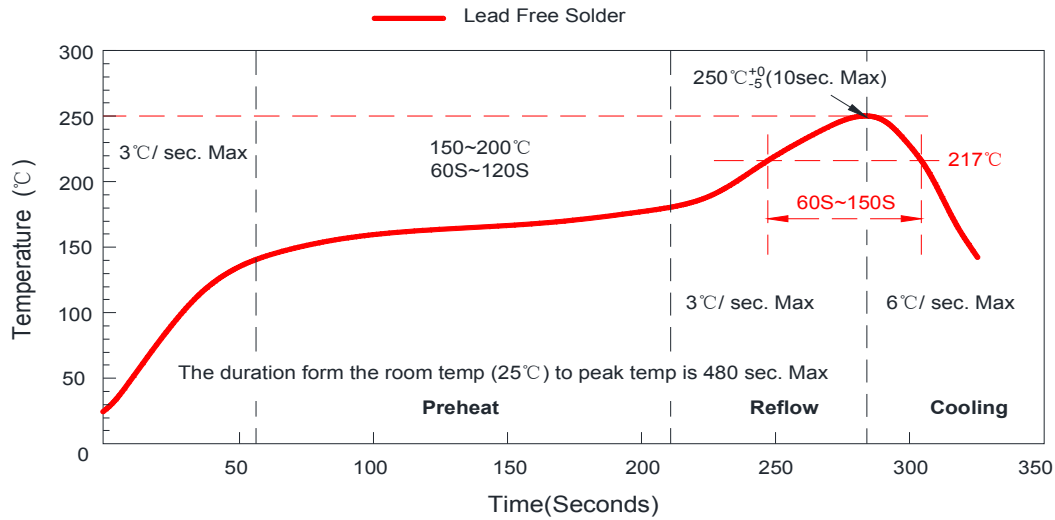
| No | Item            | Material Name                | Manufacturer              | UL File No | SGS File No                       |
|----|-----------------|------------------------------|---------------------------|------------|-----------------------------------|
| 1  | Core            | FERRITE CORE N42 or JP4A     | ACME or JINNING           | NIL        | CE/2015/B2408D<br>SHAEC1504591802 |
| 2  | Bobbin          | PM9630                       | SUMITOMO or Equivalent    | E41429     | 10363385(2)                       |
| 3  | Copper Wire     | Polyurethane wire P180       | ELEKTRISOLA or Equivalent | E258243    | CE/2015/44583                     |
| 4  | Insulation tape | 1350F-1/1350F-2 YELLOW COLOR | 3M or Equivalent          | E17385     | CE/2015/A3854                     |
| 5  | EPOXY           | TH320                        | TIANHUAN or Equivalent    | E257593    | CANEC1517332003                   |
| 6  | EPOXY           | EB-360                       | CHANGFENG or Equivalent   | NIL        | SHAEC1524764603                   |
| 7  | Solder          | Lead free solder             | HONGTAIZHOU or Equivalent | NIL        | CANEC1510999213                   |

|                       |           |                        |  |
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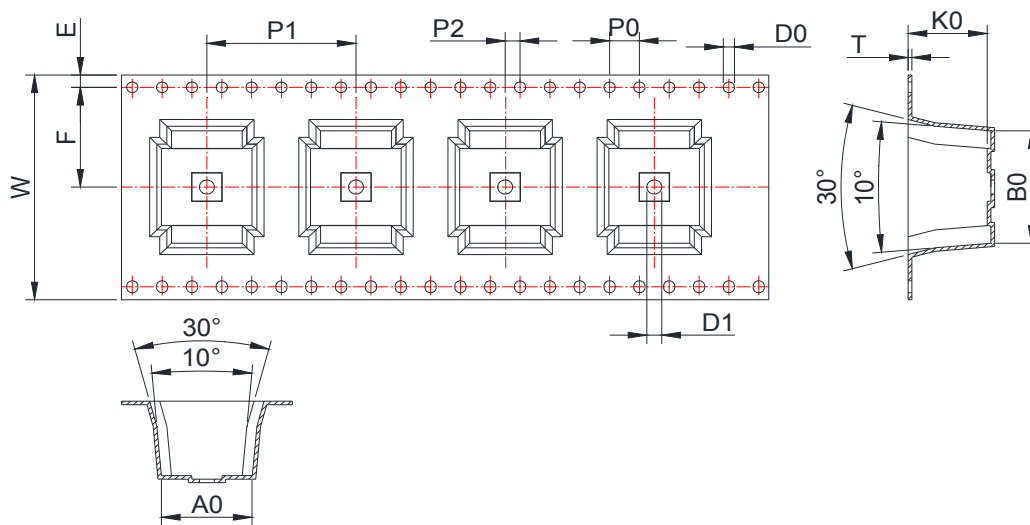
## Product Specification

### 7.Recommended Temperature Conditions of Air Reflow Soldering

Test Solderability Temperature Profile



### 8.Tape Dimensions (Unit:mm)



|        |          |          |          |          |                                   |                                   |
|--------|----------|----------|----------|----------|-----------------------------------|-----------------------------------|
| symbol | A0       | B0       | K0       | P0       | P1                                | P2                                |
| spec   | 12.0±0.1 | 16.5±0.1 | 10.6±0.1 | 4.0±0.1  | 20.0±0.1                          | 2.0±0.1                           |
| symbol | W        | T        | E        | F        | D0                                | D1                                |
| spec   | 32.0±0.3 | 0.5±0.05 | 1.75±0.1 | 14.2±0.1 | ∅1.5 <sup>+0.1</sup> <sub>0</sub> | ∅2.0 <sup>+0.1</sup> <sub>0</sub> |

|                       |           |                        |  |
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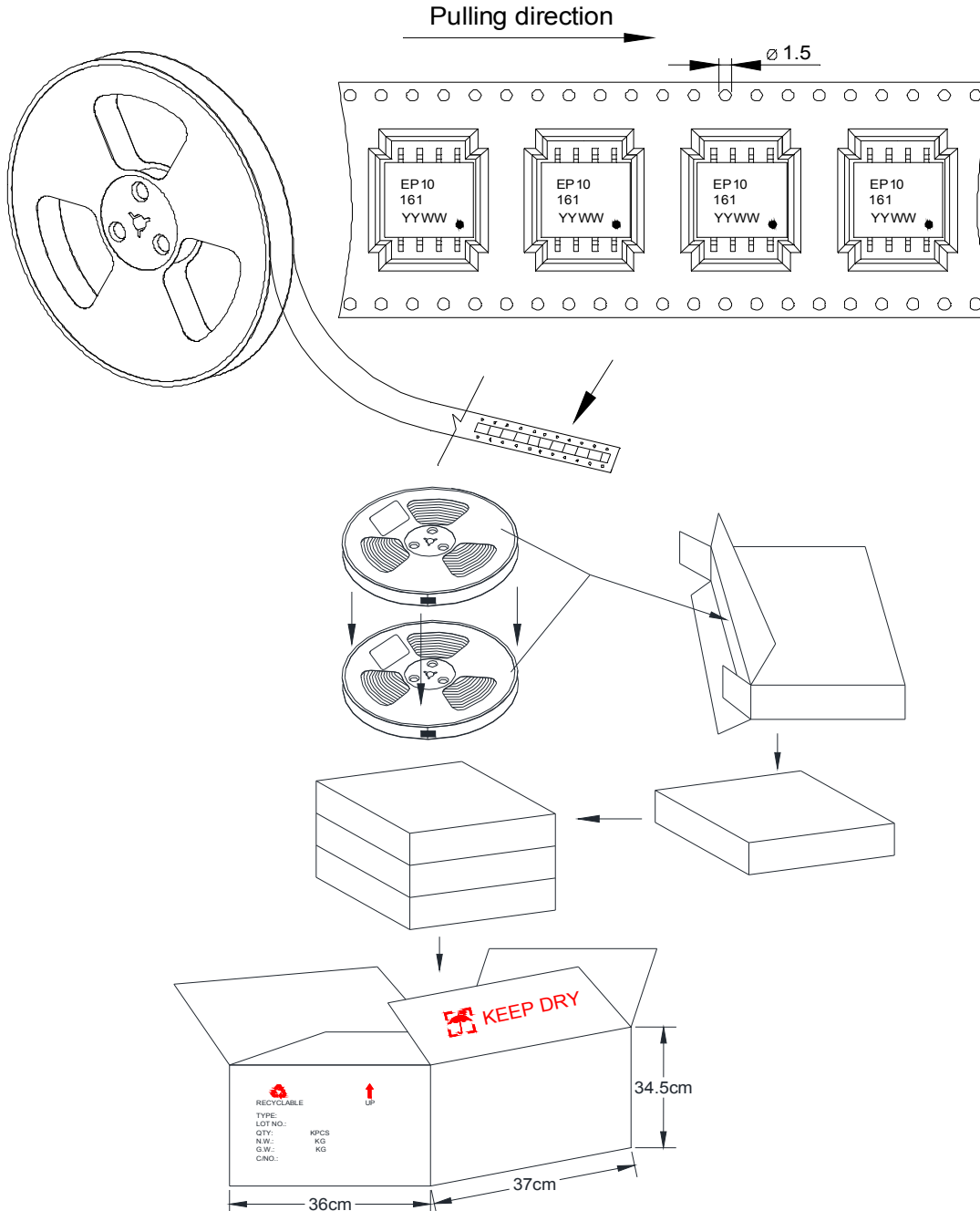
## Product Specification

### 9.Packing Request

\*Every roll of the carrier tape can contain 270pcs products.

\*Every small packing box contains two rolls of carrier tape. Total quantity: 540pcs.

\*Every cartoon box contains 3 small packing boxes. Total quantity: 1620pcs.



|                              |                  |                               |  |
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## Test Report

| Test Instruments |                          |                                     |                          |               |               |               |                   |                   |               |               |
|------------------|--------------------------|-------------------------------------|--------------------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|
|                  | HP4284A                  | HP4284A                             | HP4284A                  | VR131         |               |               | HP4284A           |                   | CS2670A       |               |
| NO               | Inductance               | Inductance                          | LK-Inductance            | DCR           |               |               | Turns ratio       |                   | Hi-Pot        |               |
|                  | L(3-4)                   | L(3-4)                              | LK(3-4)<br>tie other     | R(3-4)        | R(2-1)        | R(5,6-7,8)    | Pri: Sec          | Pri: Bias         | Pri. TO Sec.  | Bias. TO Sec. |
|                  | at<br>250KHz,0.1<br>Vrms | at<br>250KHz,0.1<br>Vrms<br>@ 0.65A | at<br>250KHz,0.1<br>Vrms | at 25°C       | at 25°C       | at 25°C       | at<br>10KHz,2Vrms | at<br>10KHz,2Vrms | 0.5mA.60SEC.  | 0.5mA.60SEC   |
|                  | 155uH±10%                | 139.5uH Min                         | 3.6uH Max                | 0.414Ω Max    | 0.822Ω Max    | 0.06Ω Max     | 1:0.262;±2%       | 1:0.667;±2%       | 1500VDC       | 1500VDC       |
| 1                | 162.90                   | 172.00                              | 2.77                     | 0.351         | 0.7427        | 0.0422        | PASS              | PASS              | PASS          | PASS          |
| 2                | 161.70                   | 175.00                              | 2.76                     | 0.352         | 0.7220        | 0.0430        | PASS              | PASS              | PASS          | PASS          |
| 3                | 161.80                   | 178.00                              | 2.90                     | 0.350         | 0.7580        | 0.0428        | PASS              | PASS              | PASS          | PASS          |
| 4                | 161.20                   | 171.00                              | 2.79                     | 0.352         | 0.7240        | 0.0427        | PASS              | PASS              | PASS          | PASS          |
| 5                | 161.80                   | 179.00                              | 2.73                     | 0.348         | 0.7210        | 0.0426        | PASS              | PASS              | PASS          | PASS          |
| MIN.             | 161.20                   | 161.20                              | 2.73                     | 0.348         | 0.7210        | 0.0422        |                   |                   |               |               |
| MAX.             | 162.90                   | 179.00                              | 2.90                     | 0.352         | 0.7580        | 0.0430        |                   |                   |               |               |
| AVG.             | 161.88                   | 168.44                              | 2.79                     | 0.351         | 0.7335        | 0.0427        |                   |                   |               |               |
| <b>Result</b>    | <b>Passed</b>            | <b>Passed</b>                       | <b>Passed</b>            | <b>Passed</b> | <b>Passed</b> | <b>Passed</b> | <b>Passed</b>     | <b>Passed</b>     | <b>Passed</b> | <b>Passed</b> |

### Overall Dimensions Test

Measurement Tools: Caliper (Unit:mm)

| NO            | A             | B             | C             | D             | E             |  |  |  |
|---------------|---------------|---------------|---------------|---------------|---------------|--|--|--|
|               | 15.24MAX.     | 12.7MAX.      | 11.0MAX.      | 0.7±0.1       | 2.54±0.3      |  |  |  |
| 1             | 14.58         | 11.65         | 10.57         | 0.67          | 2.49          |  |  |  |
| 2             | 14.63         | 11.66         | 10.78         | 0.66          | 2.47          |  |  |  |
| 3             | 14.63         | 11.73         | 10.62         | 0.68          | 2.50          |  |  |  |
| 4             | 14.56         | 11.85         | 10.54         | 0.69          | 2.48          |  |  |  |
| 5             | 14.55         | 11.64         | 10.54         | 0.68          | 2.50          |  |  |  |
| MIN.          | 14.55         | 11.64         | 10.54         | 0.66          | 2.47          |  |  |  |
| MAX.          | 14.63         | 11.85         | 10.78         | 0.69          | 2.50          |  |  |  |
| AVG.          | 14.59         | 11.71         | 10.61         | 0.68          | 2.49          |  |  |  |
| <b>Result</b> | <b>Passed</b> | <b>Passed</b> | <b>Passed</b> | <b>Passed</b> | <b>Passed</b> |  |  |  |

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