



Qs 9000 Certificate

CHILISIN ELECTRONICS CORP.

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER P/N : _____

OUR DWG No : _____

QUANTITY : _____ Pcs. DATE : 2005/02/15

ITEM : **BAL2007T2450HA1**

| SPECIFICATION ACCEPTED BY: | |
|-------------------------------|--|
| COMPONENT ENGINEER | |
| ELECTRICAL ENGINEER | |
| MECHANICAL ENGINEER | |
| APPROVED | |
| REJECTED | |

| | |
|---|--|
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| | | |
|----------|------------|-------------|
| DRAWN BY | CHECKED BY | APPROVED BY |
|----------|------------|-------------|

BAL2007T2450HA1 Specification

1 Scope: This specification applies to WLAN , Bluetooth

2 Part Numbering: Product Identification

BAL 2007 T 2450 HA 1

(1) (2) (3) (4) (5) (6)

(1) Product Code:

Ex: BAL=Balance to Unbalance

(2) Series Dimension and Impedance:

Ex: 2007= 2.0mm*1.25mm , Impedance:50/70

(3) Packing :

Ex: T=Taping , B=Bulk

(4) Central Frequency:

Ex: 2450=2.45GHz

(5) Material Code:

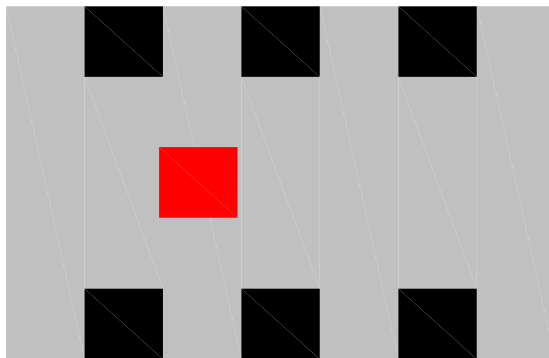
(6) Internal Code:

Ex: 1=First version , 2=Second version

3 Rating:

Operating Temperature: - 25 85

4 Marking:



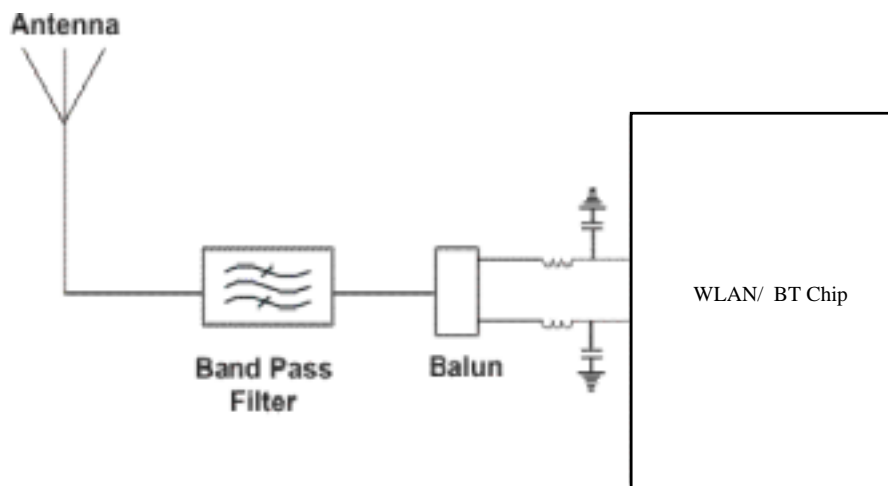
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5 Configuration and Dimensions:

| Figure | Dimension | Port | |
|--------|-----------|--------------|----------------|
| | L | 2.0±0.15 mm | --- |
| | W | 1.25±0.15 mm | --- |
| | T | 0.65±0.15 mm | --- |
| | P1 | 0.3±0.15 mm | Unbalance Port |
| | P2 | 0.3±0.15 mm | GND or DC |
| | P3 | 0.3±0.15 mm | Balance Port |
| | P4 | 0.3±0.15 mm | Balance Port |
| | P5 | 0.3±0.15 mm | GND |
| | P6 | 0.3±0.15 mm | No Connect |
| | D1 | 0.2±0.15 mm | |
| | D2 | 0.65±0.15 mm | |
| | D3 | 0.35±0.15 mm | |
| | D4 | 0.3±0.15 mm | |

6

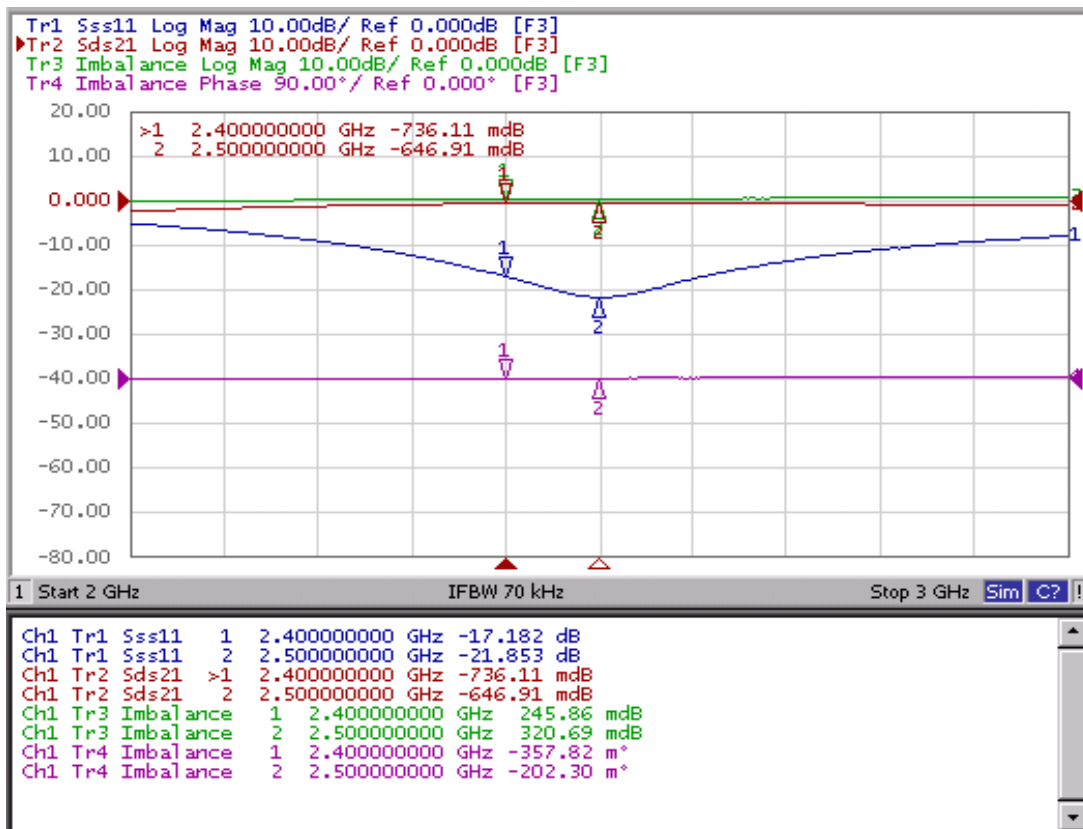
Applications



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7 ELECTRICAL CHARACTERISTICS :

| | |
|--------------------------|----------------------|
| Pass Band | 2400-2500 MHz |
| Unbalance Impedance | 50 ohm |
| Balance Impedance | 50 ohm |
| Unbalance Impedance VSWR | 2.0 (Max) |
| Insertion Loss | 1.0dB (Max) at 25 °C |
| Ripple | 0.6 dB |
| Phase Difference | 180±10 Degree |
| Amplitude Difference | 2.0 dB (Max) |
| Dimension | 2.0 x 1.25 x 0.65 mm |





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Reliability Data (Reference to IEC Specification)

| IEC384-10/ CECC32100 CLAUSE | IEC60068-2 TEST METHOD | TEST | PROCEDURE | REQUIREMENTS |
|-----------------------------------|------------------------------|---------------------------------------|---|--|
| 1-1 | | Mounting | The filter can be mounted on printedcircuit boards or ceramic substrates by applying wave soldering,reflow soldering (including vapour phase soldering) or conductive | No visible damage |
| 1-2 | | Visual inspection and dimension check | Any applicable method using*10 magnification | In accordance with specification (chip off 1 mm) |
| 1-3-1 | | Filter | VSWR < 2 at 20 | Standard test board |
| 1-4 | | Adhesion | A force of 3 N applied for 10 s to the line joining the terminations and in a plane parallel to the substrate | No visible damage |
| 1-5 | | Bond strength of plating on end face | Mounted in accordance with CECC 32 100,paragraph 4.4 | No visible damage |
| | | | Conditions: bending 0.5 mm at a rate of 1 mm/s,radius jig.340mm, 2mm warp on FR4 board of 90mm length | No visible damage |
| 1-6 | 20(Tb) | Resistance to soldering heat | 260 ± 5 for 10 ± 0.5 s in a static solder bath | No visible damage and complies with electrical performance |
| | | | 260 ± 5 for 30 ± 1.0 s in a static solder bath | Using visual enlargement of *10, dissolution of the termination shall not exceed 10% |
| | | | | |



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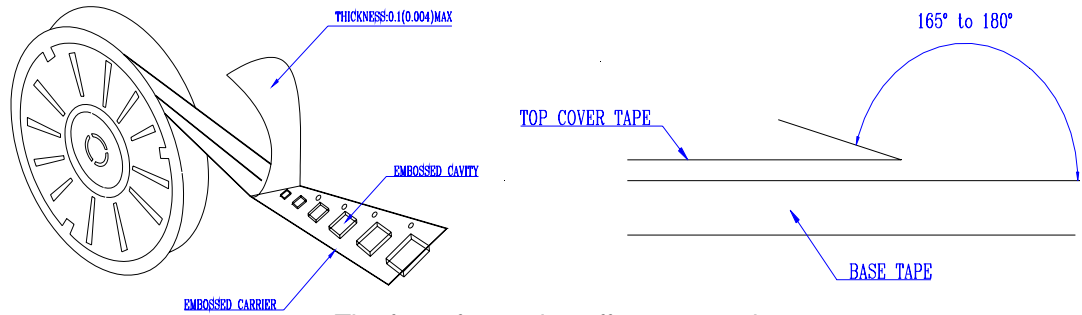
8 Reliability Data (Reference to IEC Specification)

| IEC384-10/ CECC32100 CLAUSE | IEC60068-2 TEST METHOD | TEST | PROCEDURE | REQUIREMENTS |
|-----------------------------------|------------------------------|-----------------------------|---|--|
| 1-7 | 20(Ta) | Solderability | Zero hour test, and test after storage(20 to 24months) in original atmosphere; un-mounted chips completely immersed for 2±0.5 s in 235 ± 5 . | Th termination must be well tinned, at least 75% is well tinned at termination |
| 1-8 | 4(Na) | Rapid change of temperature | -40 (30 minutes) to + 85 (30 minutes); 200 cycles | No visible damage and complies with electrical performance |
| 1-9 | IEC 60384-10 | Climate sequence | 1.Initial measurement 2.Dry Heat(16hours,85deg.C) 3.Damp heat,cycle,Test Db first cycle(24hours;55deg.C;95 to 100% R.H.) 4.Cold(-20deg.C,2hours) 5.Damp heat,cycle,Test Db, remaining 6.Final measurements | No visible damage and complies with electrical performance |
| 1-10 | 3(Ca) | Damp heat | 500 ± 12 hours at 40 ; 90 to 95 % RH | No visible damage and complies with electrical performance |
| 1-11 | | Endurance | 500 ± 12 hours at 85 ; | No visible damage and complies with electrical performance |

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9 PACKAGING

9.1 Packaging -Cover tape

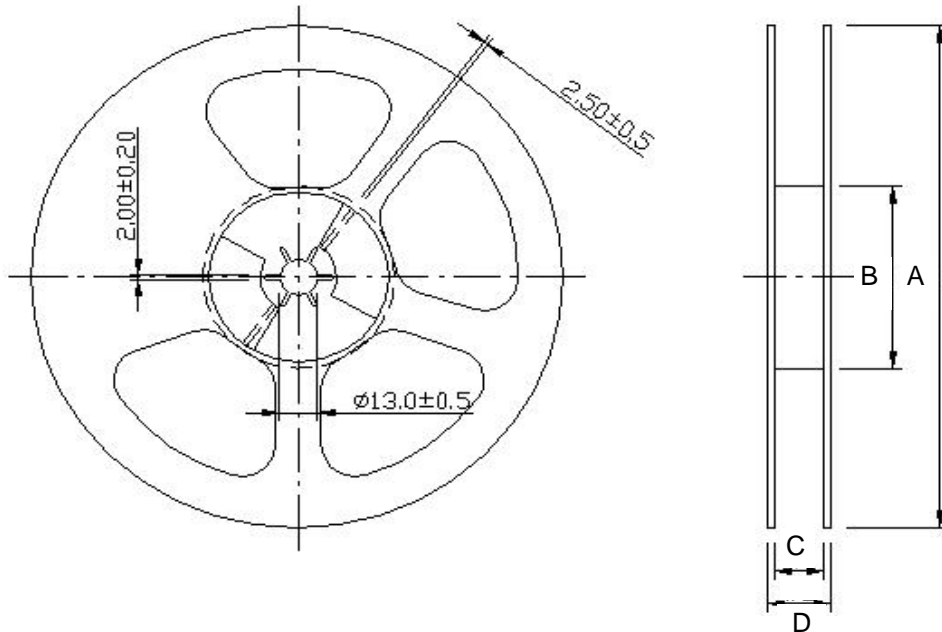


The force for tearing off cover tape is 10 to 60 grams in the arrow direction.

9.2 Packaging Quantity

| TYPE | BULK | PCS/REEL |
|---------|------|----------|
| BAL2012 | ✓ | 4000 |

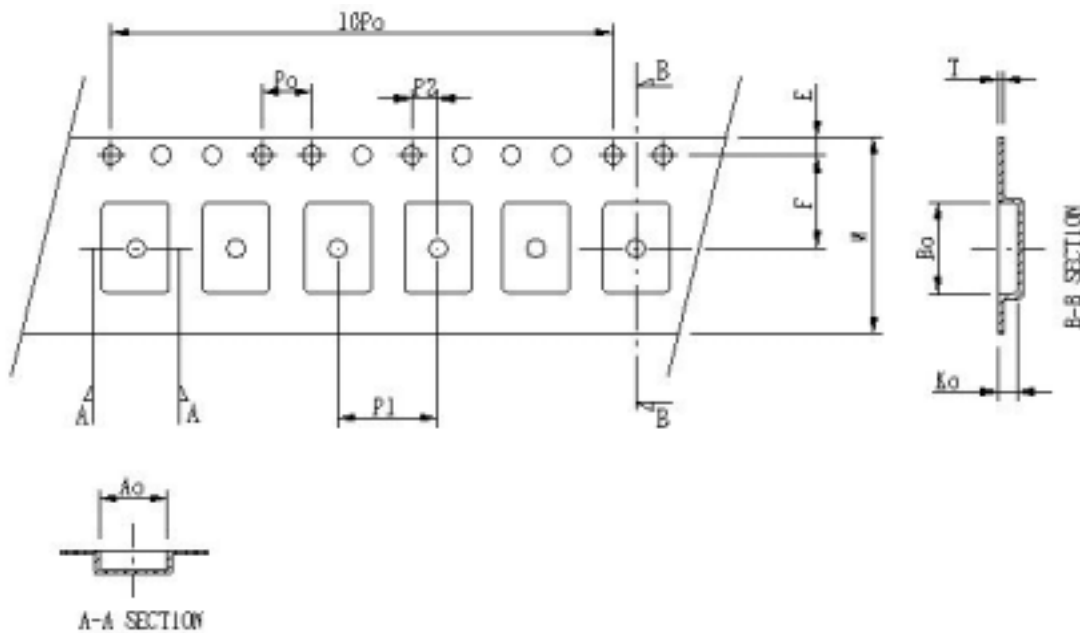
9.3 Reel Dimensions



| TYPE | A | B | C | D |
|---------|-------|--------|------------------------------------|----------|
| BAL2012 | 178±1 | 62±1.5 | 8.4 ^{+0.15} ₋₀ | 14.4 max |

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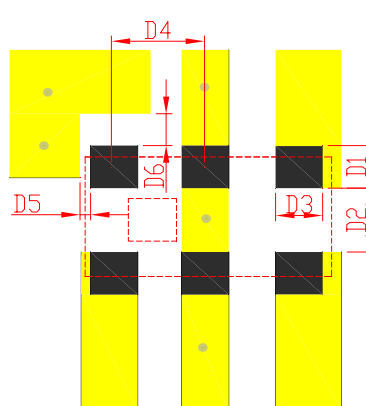


9 PACKAGING
9.4



| Serial no | Checking note | Index | Spec(mm) |
|-----------|--------------------------------------|-------|-----------|
| 1 | Sprocket hole | Do | 1.50±0.10 |
| 2 | Pocket hole | D1 | ≥1 |
| 3 | Distance sprocket hole/sprocket hole | Po | 4.0±0.10 |
| 4 | Distance pocket/pocket | P1 | 4.0±0.10 |
| 5 | Distance sprocket hole/pocket | P2 | 2.0±0.10 |
| 6 | Tape width | W | 8.1±0.20 |
| 7 | Distance sprocket hole/outside | E | 1.75±0.10 |
| 8 | Distance sprocket hole/pocket | F | 3.5±0.05 |
| 9 | Pocket length nominal clearance | Ao | 2.23±0.10 |
| 10 | Pocket length nominal clearance | Bo | 2.72±0.10 |
| 11 | Pocket depth minimum clearance | Ko | 1.15±0.10 |
| 12 | Thickness of tape | T | 0.22±0.05 |
| 13 | 10x sprocket hole pitch | 10Po | 40.0±0.20 |

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10 Recommended Pattern

| Figure | Dimension | | Remark |
|---|---|---------------|----------|
|  | D1 | 1.0 ± 0.1 mm | --- |
| | D2 | 0.8 ± 0.1 mm | --- |
| | D3 | 0.35 ± 0.1 mm | --- |
| | D4 | 0.65 ± 0.1 mm | --- |
| | D5 | 0.25 ± 0.1 mm | --- |
| | D6 | 0.25 ± 0.1 mm | --- |
| |  | d=0.3 mm | via hole |
|  | | Land | |

11 Note:

1. Please make sure that your product is has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
5. Storage and Handling Requirements

(1) Storage period

Use the products within 12 months after delivered

Solderability should be checked if this period is exceeded

(2) Storage conditions

*Products should be stored in the warehouse on the following conditions

Temperature: -10 ~ 40

Humidity : 30% ~ 70% relative humidity no rapid change on temperature and humidity

The electrode of the products is coated with solder. Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solderability.

*Products should not be stored on bulk packaging condition to prevent the chipping of the core and the breaking of winding wire caused by the collision between the products.

*Products should be stored on the palette for the prevention of the influence from humidity, dust and so on.

*Products should be stored in the warehouse without heat shock, vibration, direct sunlight and so on

(3) Handling Condition

Care should be taken when transporting or handing product to avoid excessive vibration or mechanical shock.



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12 Revision Control :

| Revision | Date | Content | Remark |
|----------|-----------|-----------|--------|
| 1 | 2005/2/15 | New Issue | |
| 2 | | | |
| 3 | | | |