



Qs 9000 Certificate

CHILISIN ELECTRONICS CORP.

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER P/N : _____

OUR DWG No : _____

QUANTITY : _____ Pcs. DATE : 2005/04/15

ITEM : **BAL1810T2450HA1**

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

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DRAWN BY	CHECKED BY	APPROVED BY
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BAL1810T2450HA1 Specification

1 Scope: This specification applies to WLAN , Bluetooth

2 Part Numbering: Product Identification

BAL 1810 T 2450 HA 1

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

(1) Product Code:

Ex: BAL=Balance to Unbalance

(2) Series Dimension and Impedance:

Ex: 1810= 1.6mm*0.8mm , Impedance:50/100

(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:



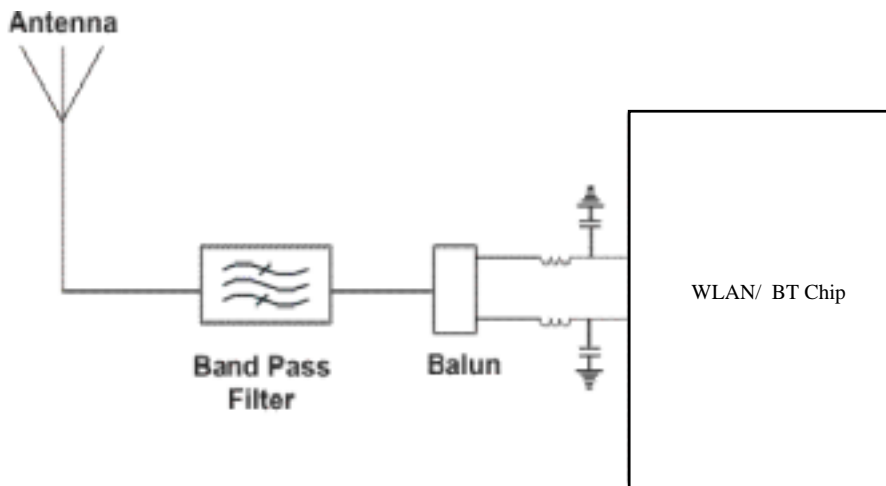
BAL1810T2450HA1 Specification

5 Configuration and Dimensions:

Figure	Dimension	Port	
	L	1.6±0.1 mm	---
	W	0.8±0.1 mm	---
	T	0.55±0.1 mm	---
	P1	0.3±0.1 mm	Unbalance Port
	P2	0.3±0.1 mm	GND or DC
	P3	0.3±0.1 mm	Balance Port
	P4	0.3±0.1 mm	Balance Port
	P5	0.3±0.1 mm	GND
	P6	0.3±0.1 mm	No Connect
	D1	0.1±0.1 mm	
	D2	0.55±0.1 mm	
	D3	0.25±0.1 mm	
	D4	0.15±0.1 mm	

6

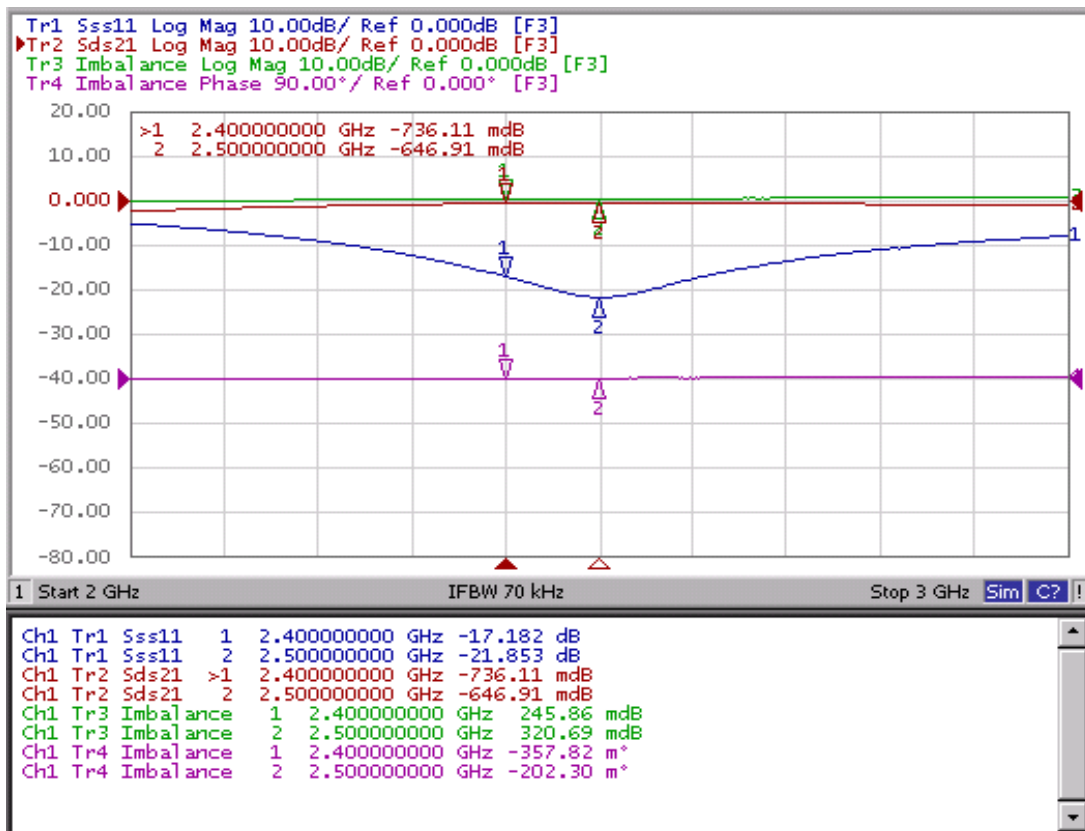
Applications



BAL1810T2450HA1 Specification

7 ELECTRICAL CHARACTERISTICS :

Pass Band	2400-2500 MHz
Unbalance Impedance	50 ohm
Balance Impedance	100 ohm
Unbalance Impedance VSWR	2.0 (Max)
Insertion Loss	1.2dB (Max) at 25 °C
Ripple	0.6 dB
Phase Difference	180±10 Degree
Amplitude Difference	2.0 dB (Max)
Dimension	1.6 x 0.8 x 0.55 mm



BAL1810T2450HA1 Specification

8

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%



Qs 9000 Certificate

CHILISIN ELECTRONICS CORP.

BAL1810T2450HA1 Specification

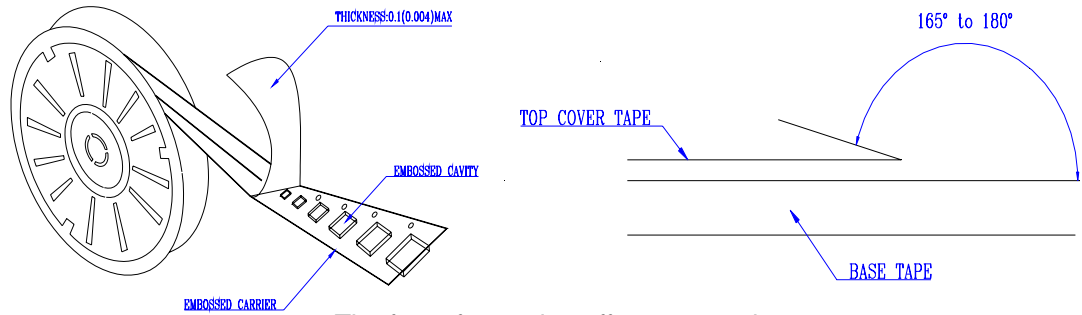
8 Reliability Data (Reference to IEC Specification)

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

BAL1810T2450HA1 Specification

9 PACKAGING

9.1 Packaging -Cover tape

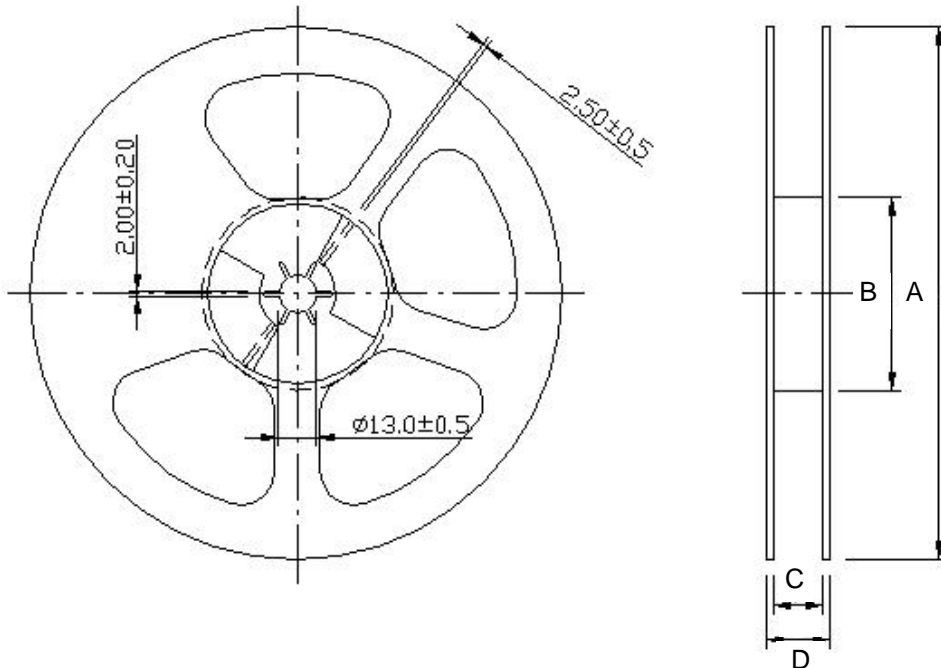


The force for tearing off cover tape is 10 to 60 grams in the arrow direction.

9.2 Packaging Quantity

TYPE	BULK	PCS/REEL
BAL1608	✓	4000

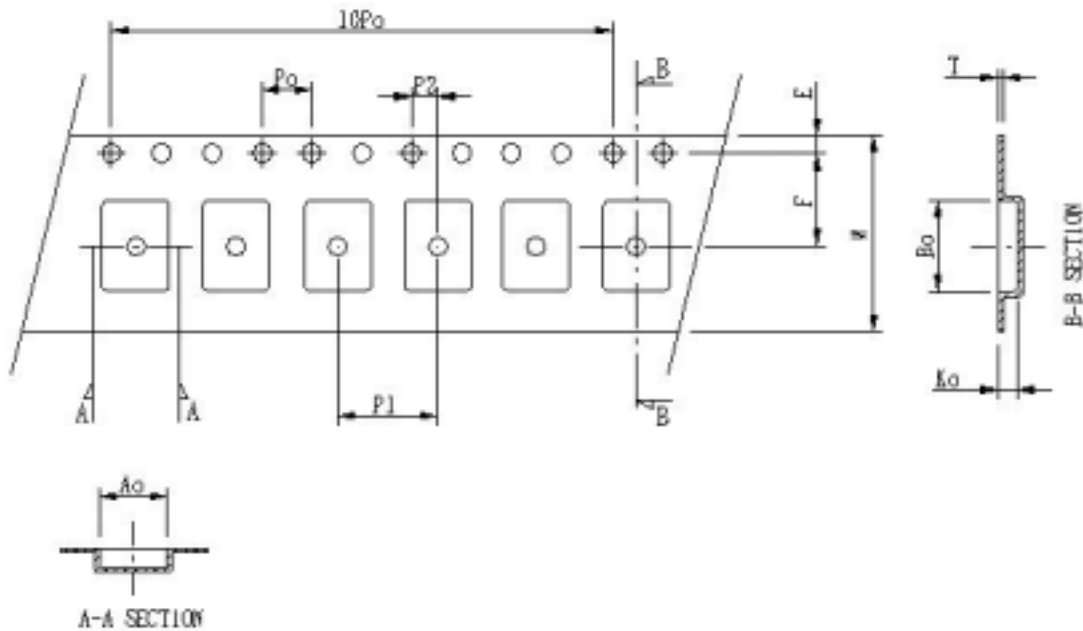
9.3 Reel Dimensions



TYPE	A	B	C	D
BAL1608	178±1	62±1.5	8.4 ^{+0.15} ₋₀	14.4 max

BAL1810T2450HA1 Specification

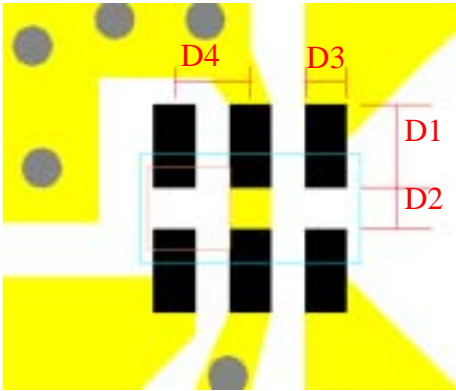
9 PACKAGING
9.4



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

BAL1810T2450HA1 Specification

10 Recommended Pattern

Figure	Dimension	Remark		
	D1	0.6 ± 0.1 mm	---	
	D2	0.3 ± 0.1 mm	---	
	D3	0.3 ± 0.1 mm	---	
	D4	0.55 ± 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 handling product to avoid excessive vibration or mechanical shock.



Qs 9000 Certificate

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BAL1810T2450HA1 Specification

12 Revision Control :

Revision	Date	Content	Remark
1	2006/2/5	New Issue	
2			
3			