



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

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## Product Specifications Approval Sheet

Product Description: LTCC Filter 2450MHz BW100MHz Size 1.6x0.8 mm

TST Part No.: TL0036A

Customer Part No.: \_\_\_\_\_

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Hong Pu Lin *Hong Pu Lin*

Approved by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2002/09/15

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the change



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## LTCC Filter 2450 MHz SMD 1.6X0.8 mm

MODEL NO.:TL0036A

REV.1

### A. MAXIMUM RATING:

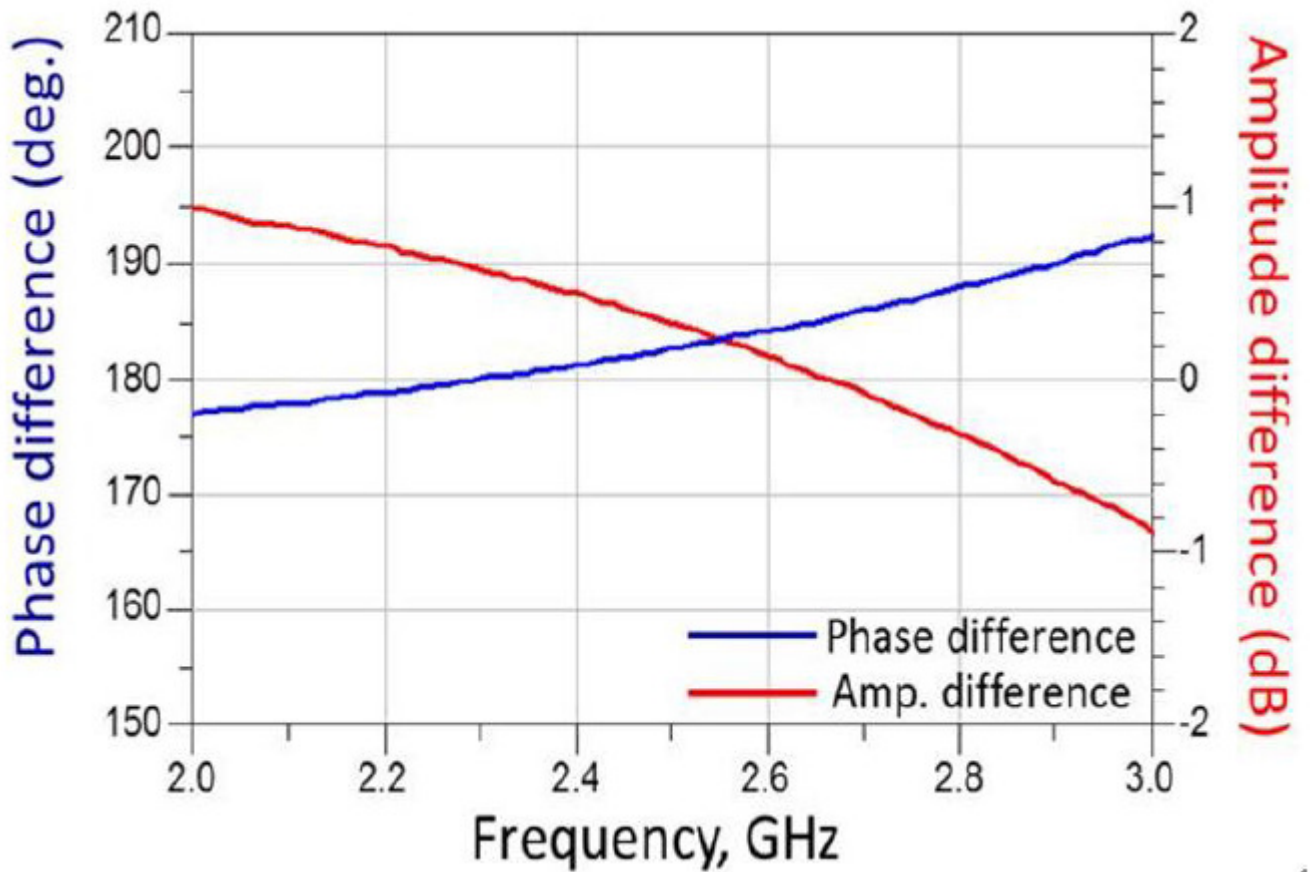
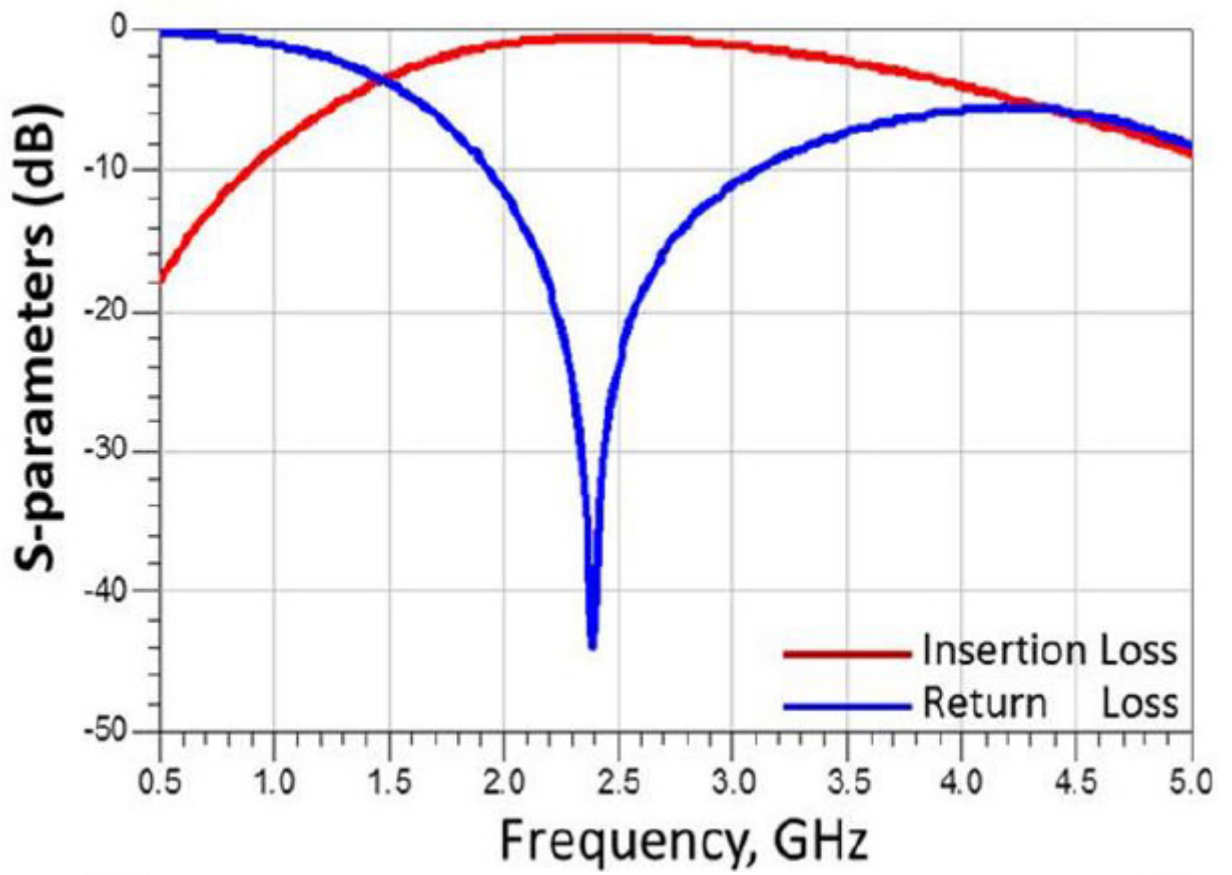
1. Operating temperature range: -40 °C to +85 °C
2. Storage temperature range: -40 °C to +85 °C
3. Impedance (Unbalanced) : 50Ω
4. Moisture Sensitive Level: Level 1 (MSL1) (Refer to : IPC/JEDEC J-STD-020)

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Item	Specifications
Frequency range	2400 ~ 2500 MHz
Insertion Loss	1.2 dB max at 25 °C 1.5 dB max at -40 °C to +85 °C
Phase Difference	180°±10°
Amplitude Difference	2.0 dB Max.
VSWR	2.0 Max.
Impedance (Unbalanced)	50Ω
Impedance (Balanced)	50Ω
Operating temperature Range	-40 °C~85 °C
Moisture sensitivity levels	MSL is LEVEL 1 (Refer to : IPC/JEDEC J-STD-020)

C. FREQUENCY CHARACTERISTICS:



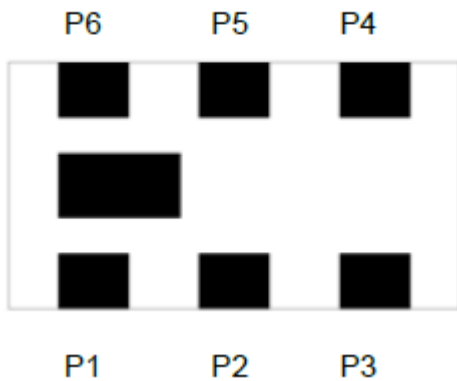
## D. OUTLINE DRAWING:

### DIMENSIONS

Figure	Symbol	Dimension (mm)
<p>The figure shows three views of a component: Top view, Bottom view, and Side view. The Top view shows a rectangular shape with a central horizontal bar and two vertical bars on either side. The Bottom view shows the same shape from the opposite side. The Side view shows the profile of the component with dimensions A, B, C, and D. Dimension E is the width of the top bar in the Top view. Dimension L is the length of the component. Dimension W is the width of the component. Dimension T is the thickness of the component. Dimensions A, B, C, and D are the heights of the different layers of the component.</p>	L	$1.60 \pm 0.15$
	W	$0.80 \pm 0.15$
	T	$0.50 \pm 0.10$
	A	$0.175 \pm 0.15$
	B	$0.25 \pm 0.15$
	C	$0.25 \pm 0.15$
	D	$0.50 \pm 0.15$
	E	$0.20 \pm 0.15$

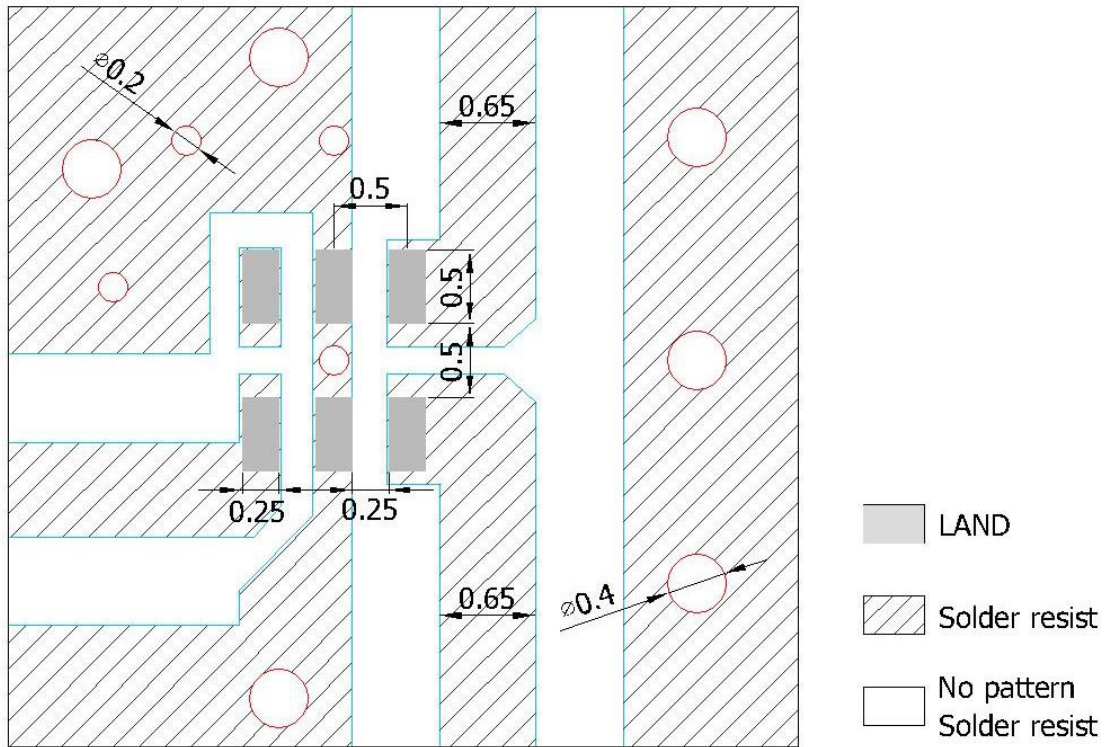
## E. CONSTRUCTION:

Top view



PIN	Definition	PIN	Definition
P1	Unbalance Port	P4	Balance Port
P2	DC or GND	P5	GND
P3	Balance Port	P6	NC

**F. PCB FOOT PRINT:**



Unit: mm

Line width to be designed to match 50Ω characteristic impedance ,depending on PCB material and thickness.

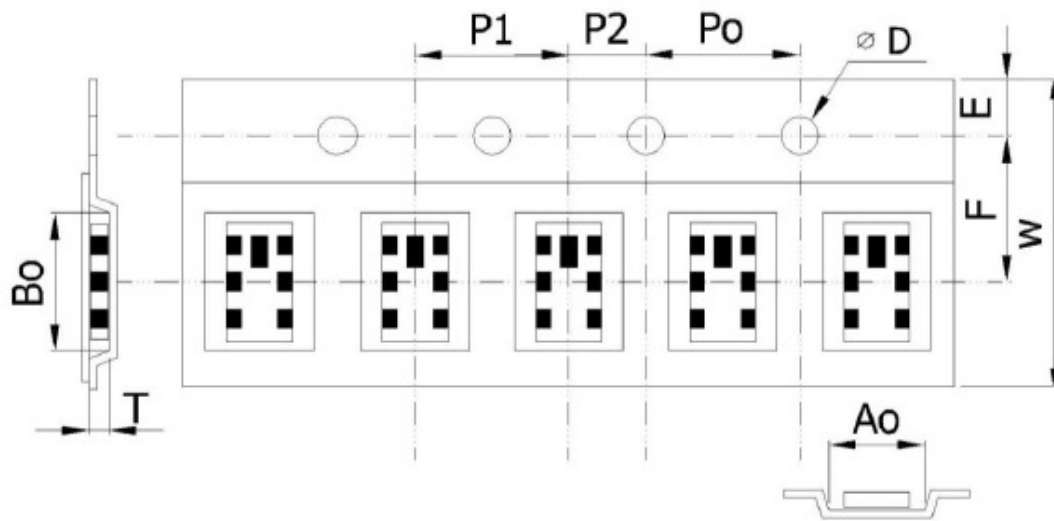
**G. PACKING:**

**ORDERING CODE**

RF	BLN	160805	0	A	G7C5T
Walsin RF device	Product Code BLN : BALUN	Dimension code Per 2 digits of Length, Width, Thickness : e.g. : 160805= Length 16, Width 08, Thickness 05	Unit of dimension 0 : 0.1 mm 1 : 1.0 mm	Application A : 2.4GHz ISM Band	Specification Design Code

Minimum Ordering Quantity: 4000 pcs per reel.

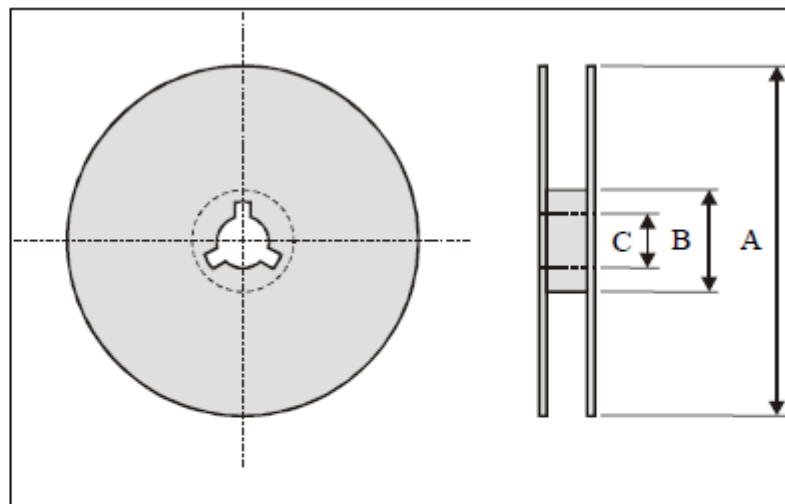
## PACKAGING



### Paper Tape specifications (unit :mm)

Index	Ao	Bo	$\phi D$	T	W
Dimension (mm)	$0.975 \pm 0.05$	$1.76 \pm 0.05$	$1.55 + 0.05$	$0.75 \pm 0.10$	$8.00 \pm 0.10$
Index	E	F	Po	P1	P2
Dimension (mm)	$1.750 \pm 0.100$	$3.50 \pm 0.050$	$4.00 \pm 0.100$	$4.00 \pm 0.100$	$2.000 \pm 0.050$

### Reel dimensions



Index	A	B	C
Dimension (mm)	$\phi 178.0$	$\phi 60.0$	$\phi 13.0$

Taping Quantity: 4000 pieces per 7" reel

## H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (20~40sec).
4. Time: 2 times.

