



# 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 3600 MHz Size 2.0x1.25 mm (400 MHz BW)

TST Part No.: TL0033A

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

Customer signature required

Company: \_\_\_\_\_

Division: \_\_\_\_\_

Approved by : \_\_\_\_\_

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

Checked by: \_\_\_\_\_ Hongpu Lin Hongpu Lin

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

Date: \_\_\_\_\_ 2020/08/25

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 3600 MHz SMD 2.0X1.25 mm (400 MHz BW)

MODEL NO.:TL0033A

REV.2.0

### A. MAXIMUM RATING:

1. Input Power Level:2W
2. Operating temperature range: -40 °C to +85 °C
3. Storage temperature range: -40 °C to +85 °C
4. Moisture Sensitive Level: Level 1 (MSL1)

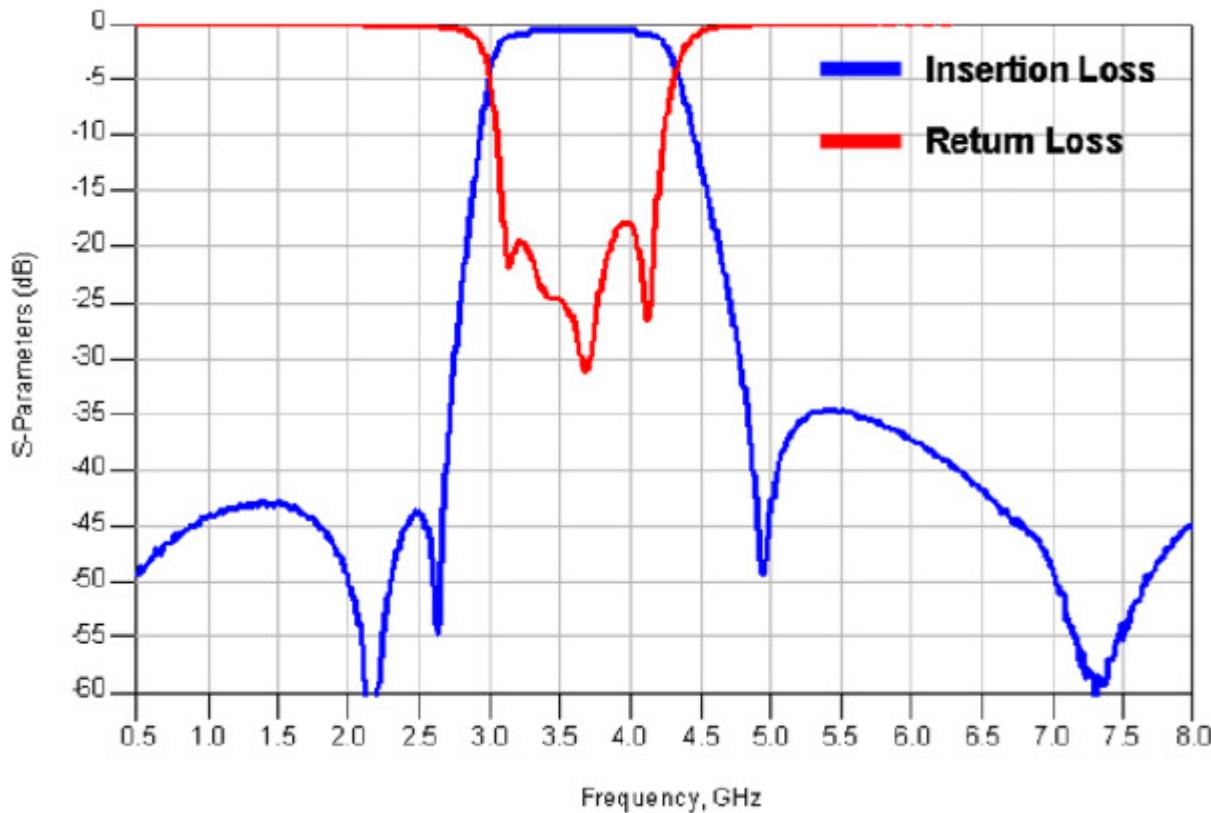
RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

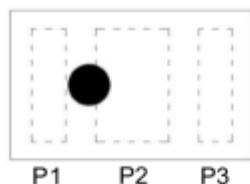
Parameters	Unit	Specifications	Remark
Center Frequency (Fc)	MHz	3600.0	
Pass Band Width (BW)	MHz	3400.0 ~ 3800.0	
Insertion Loss (at 25°C)	dB	1.2 max. @ 3400 ~ 3600 MHz 1.5 max. @ 3600 ~ 3800 MHz	
Insertion Loss (at -40~ +85°C)	dB	1.4 max. @ 3400 ~ 3600 MHz 1.7 max. @ 3600 ~ 3800 MHz	
Attenuation	dB	38 min. @ 698 ~ 2170 MHz 28 min. @ 2300 ~ 2700 MHz 30 min. @ 4900 ~ 5850 MHz	
Return Loss	dB	10 min.	
Characteristics impedance	Ω	50	
Power Capacity	W	2 max.	
Moisture sensitivity levels		LEVEL 1 (Refer to : IPC/JEDEC J-STD-020)	

### C. FREQUENCY CHARACTERISTICS:



### D. DIMENSIONS: (Unit: mm)

Top view

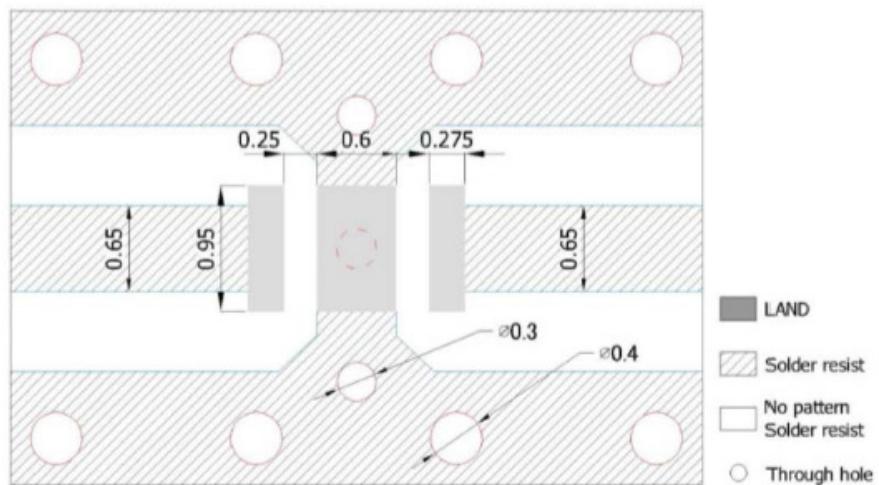


PIN	Connection
P1	Input port
P2	GND
P3	Output port

#### DIMENSIONS

Figure	Symbol	Dimension (mm)
Top view	L	2.00 $\pm$ 0.15
Bottom view	W	1.25 $\pm$ 0.15
Bottom view	T	0.65 max.
Bottom view	A	0.95 $\pm$ 0.10
Bottom view	B	0.275 $\pm$ 0.10
Bottom view	C	0.25 $\pm$ 0.10
Bottom view	D	0.60 $\pm$ 0.10
Bottom view	E	0.175 $\pm$ 0.10
Side view	F	0.15 $\pm$ 0.10

## Recommended Footprint(PCB Layout)



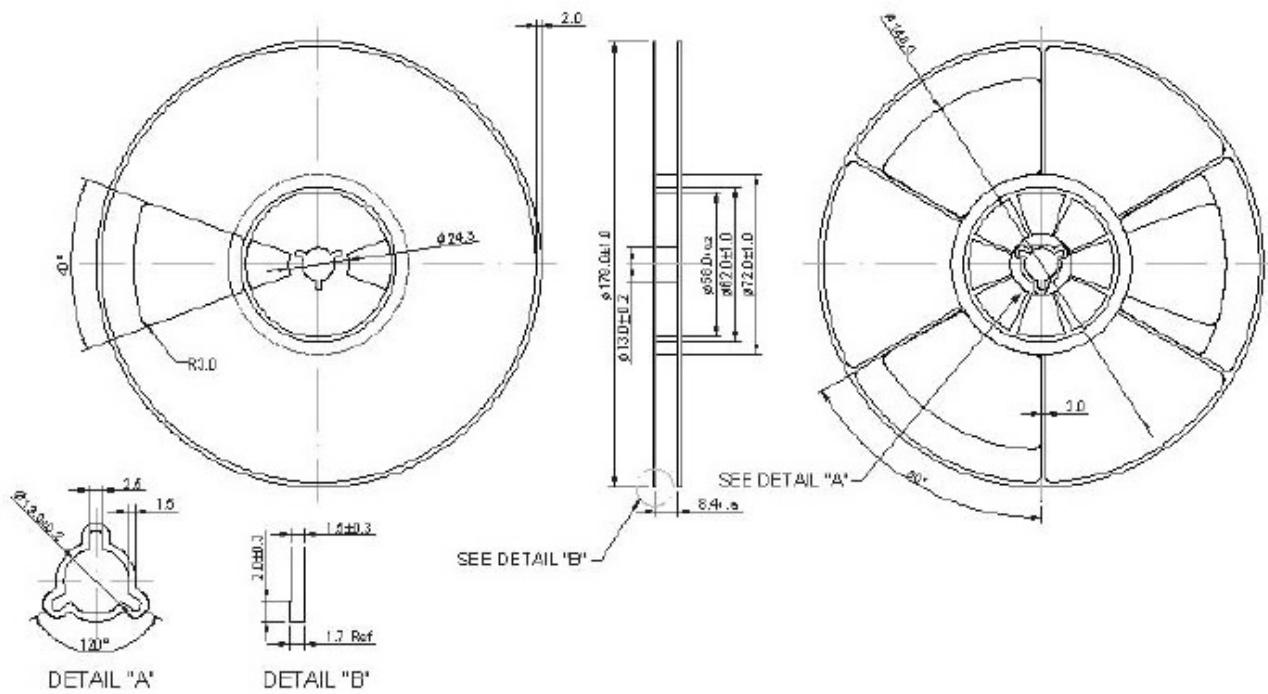
Unit : mm

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

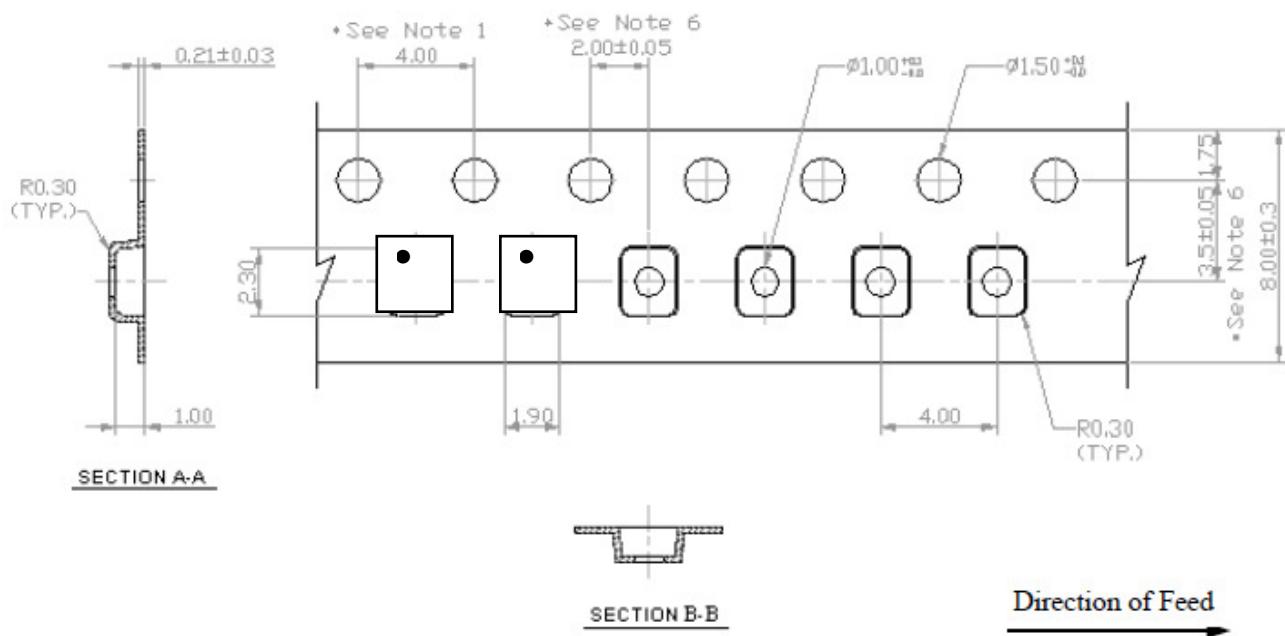
### E. Packing

#### 1. REEL DIMENSION

(Reel Count : 7"=2000 )

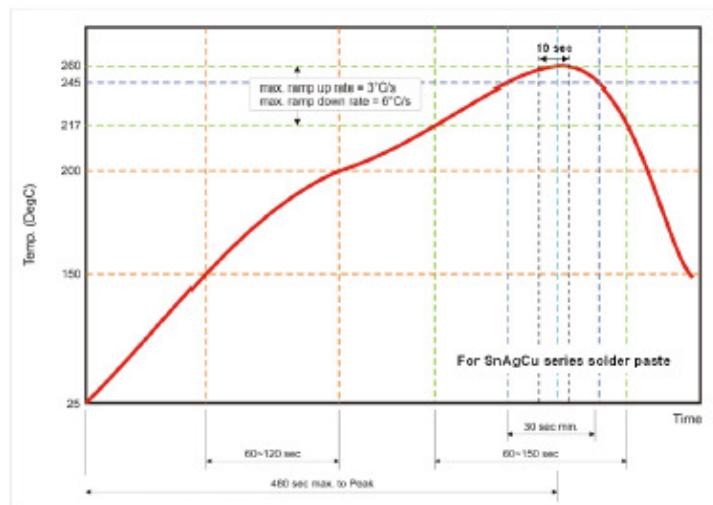


## 2. Tape Dimension



#### **F . Recommended reflow profile :**

Typical examples of soldering processes that provide reliable joints without any damage are given in Fig 2.



**Fig 2. Infrared soldering profile**