



# 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 902.5(890 ~ 915) MHz SMD 2.0x1.25 mm (25MHz BW)

TST Part No.: TL0023A

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

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

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

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

Date: \_\_\_\_\_ 2018/12/04

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 902.5(890~915) MHz SMD 2.0X1.25 mm (25 MHz BW)

MODEL NO.:TL0023A

REV.1

### A. MAXIMUM RATING:

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

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

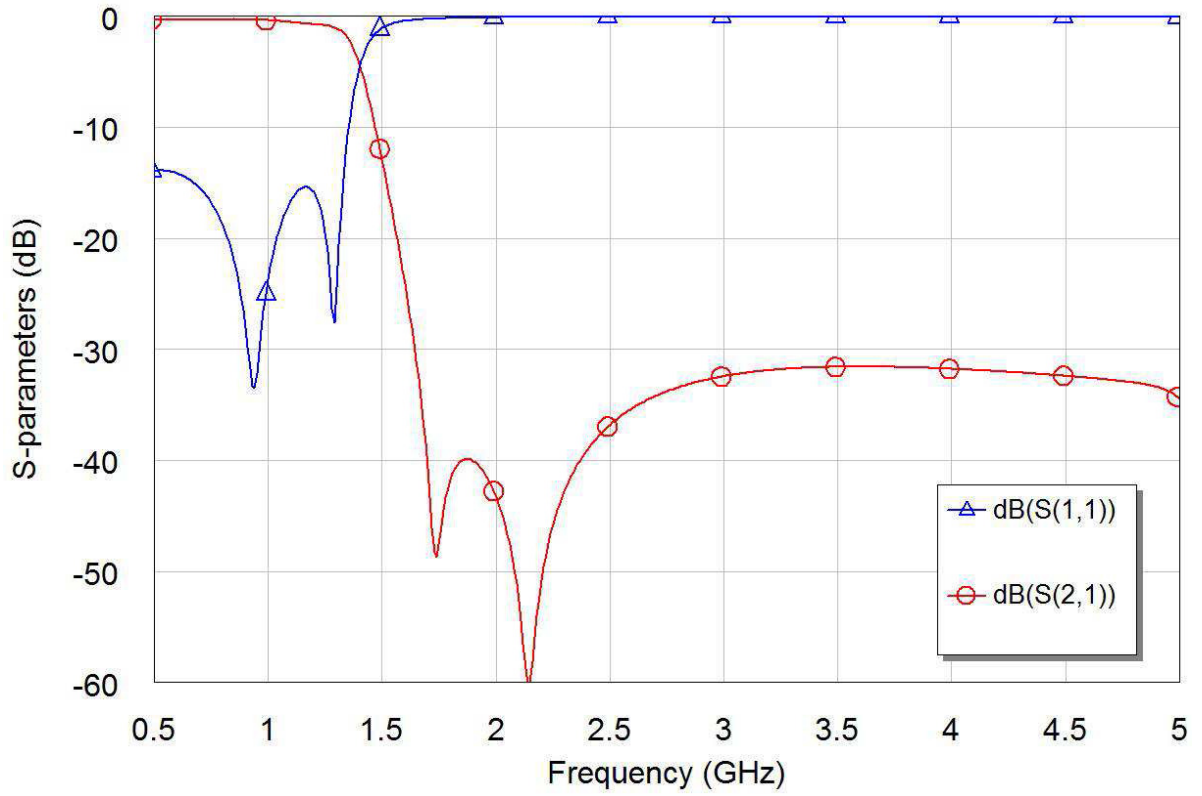
Source impedance (unbalanced) :  $Z_s = 50 \Omega$

Load Impedance (balanced) :  $Z_L = 50 \Omega$

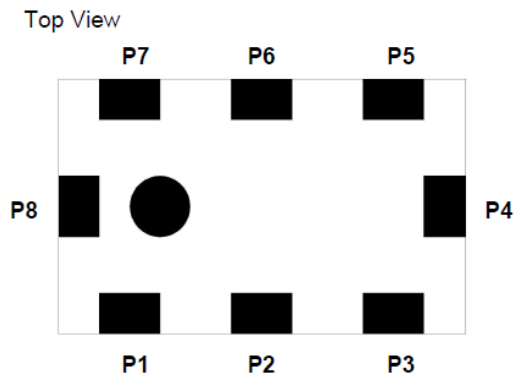
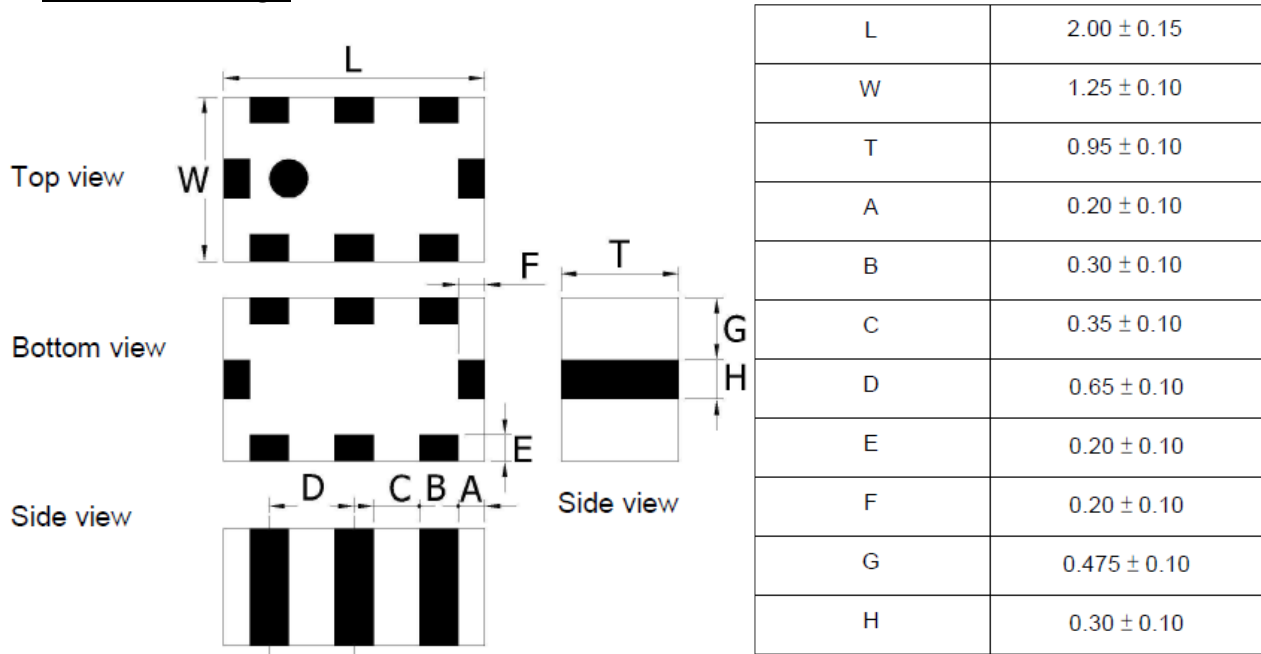
Item	Unit	Spec
<b>Frequency Range</b>	MHz	902.5±12.5
<b>Insertion loss</b> (890 ~ 915 MHz) 25°C <b>IL</b>	dB	0.6 Max
<b>Insertion loss</b> (890 ~ 915 MHz) -40~85°C <b>IL</b>	dB	0.75 Max
<b>VSWR</b>	dB	2.0 Max
<b>Attenuation</b> (Reference level from 0 dB)		
1720 ~ 1765 MHz	dB	40 Min
1780 ~ 1830 MHz	dB	30 Min
2670 ~ 2745 MHz	dB	30 Min

### C. FREQUENCY CHARACTERISTICS:

#### Frequency Response



### D. Outline Drawing :

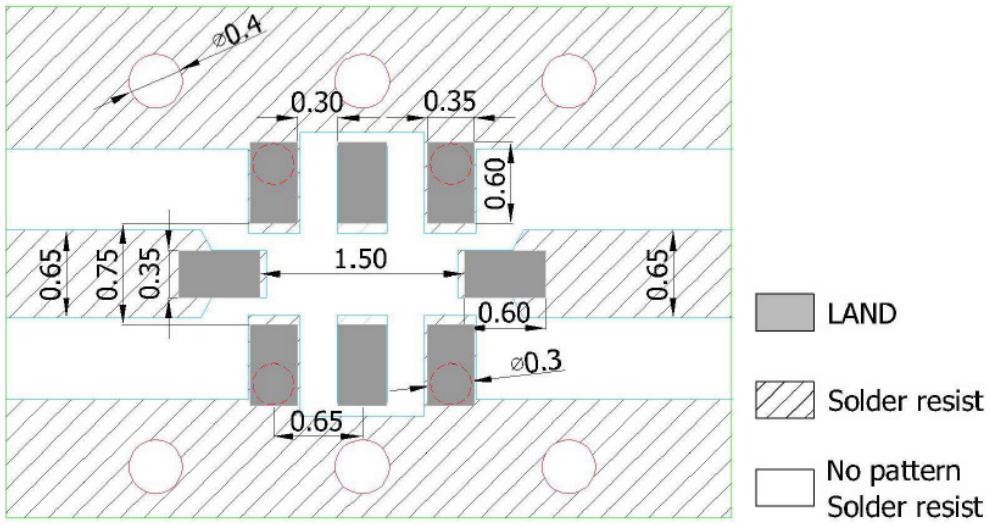


PIN	Definition	PIN	Definition
P1	Ground	P5	Ground
P2	NC	P6	NC
P3	Ground	P7	Ground
P4	Input / output	P8	Input / output

### Date code

RF	LPF	2012	0G9	D	1	T
RF device	<b>Product Code</b> LPF : Low Pass Filter	<b>Dimension code</b> Per 2 digits of Length, Width, : e.g. : 2012 = Length 20, Width 12,	<b>Central Frequency</b> 0G9 :0.9 GHz	<b>Application</b> D :GSM900/ DCS1800	<b>Specification</b> Design code	<b>Packing</b> T : Reeled

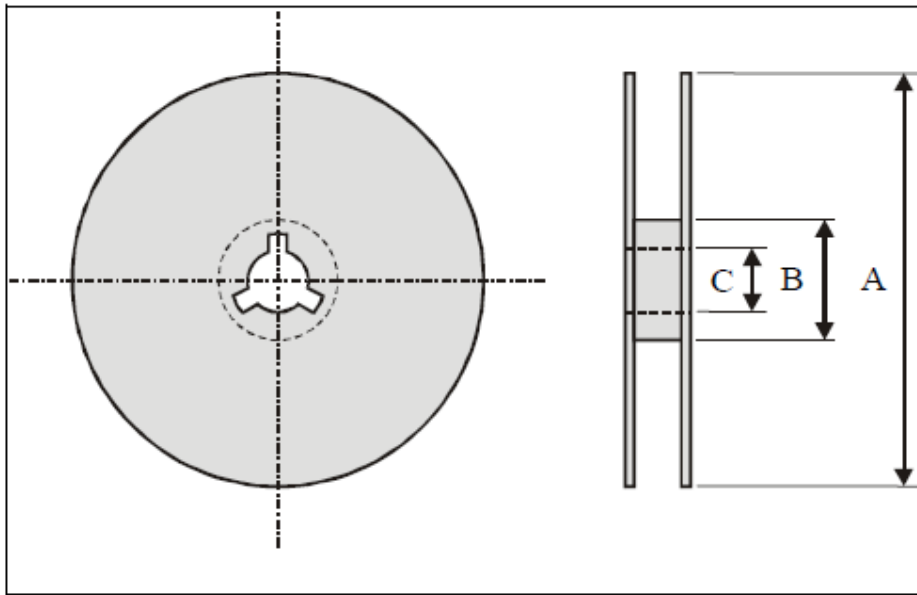
### E. PCB Footprint



**F. PACKING:**

1. REEL DIMENSION

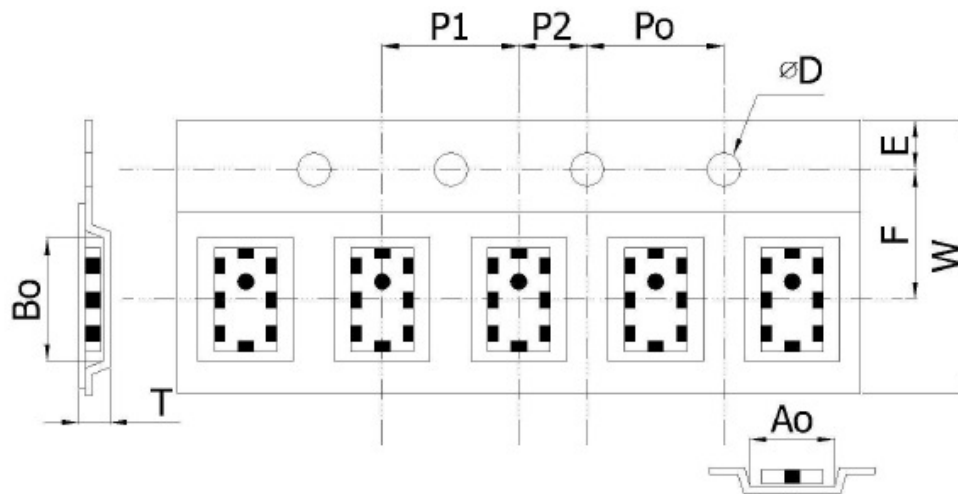
(Please refer to FR-75D10 for packing quantity)



Index	A	B	C
Dimension (mm)	178.0	60.0	13.0

2. TAPE

DIMENSION

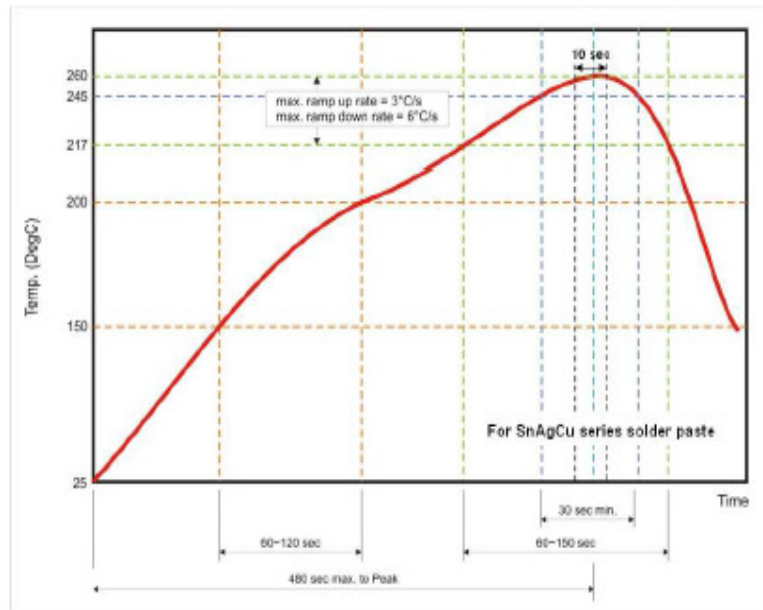


Plastic Tape specifications (unit :mm)

Index	A <sub>0</sub>	B <sub>0</sub>	ØD	T	W
Dimension (mm)	1.40 ± 0.10	2.30 ± 0.10	1.55 ± 0.10	1.10 ± 0.10	8.0 ± 0.10
Index	E	F	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>
Dimension (mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10

## G . 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**