



# 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: Dielectric Filter 7987.2MHz BW 500MHz Size 8.7x3.5mm  
TST Parts No.: TR0116AA0090

Customer Parts No.: \_\_\_\_\_

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

Checked by: \_\_\_\_\_ Nina Chen *Nina Chen*

Approved by: \_\_\_\_\_ Kazuma Lee *Kazuma Lee*

Date: \_\_\_\_\_ 2023/05/22

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 changes.



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## Dielectric Filter 7987.2MHz BW 500MHz Size 8.7x3.5mm

MODEL NO.: TR0116AA0090

REV. NO.:1.0

### A. Maximum Rating:

1. Input Power:1W max.
2. Operating Temperature: -40°C to +85°C
3. Storage Temperature: -40°C to +85°C
4. Moisture Sensitivity Level: 2a(MSL 2a)

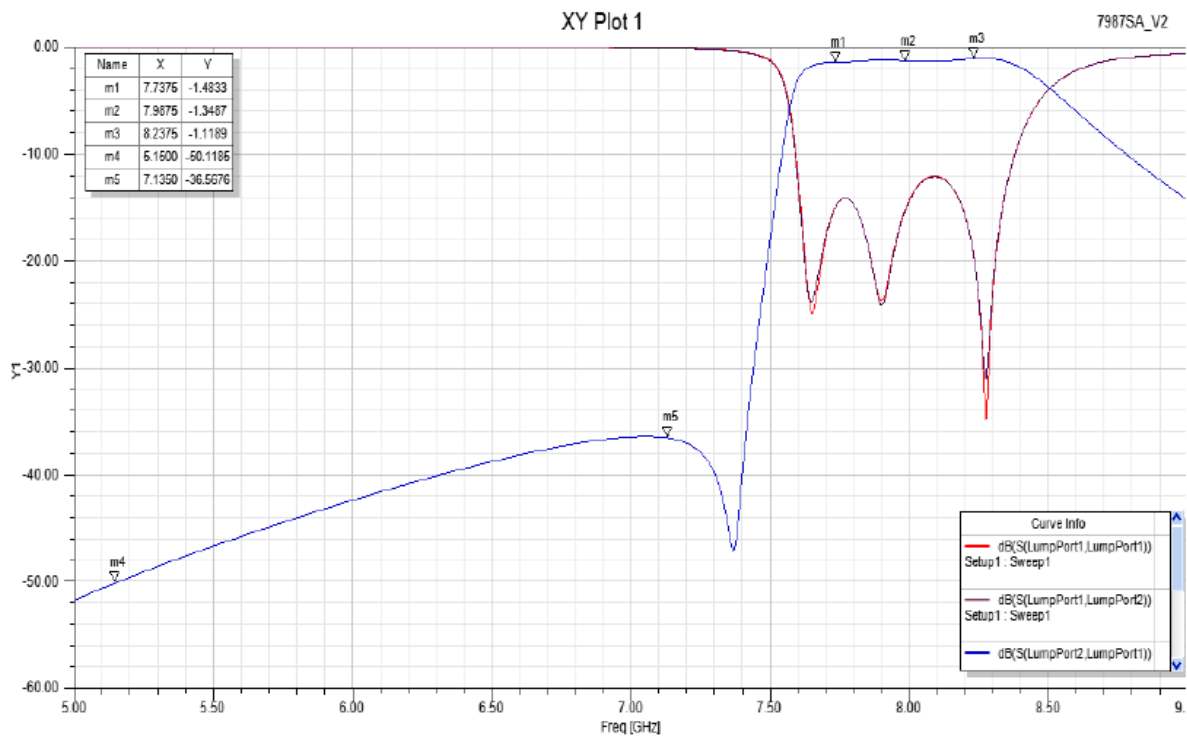
RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

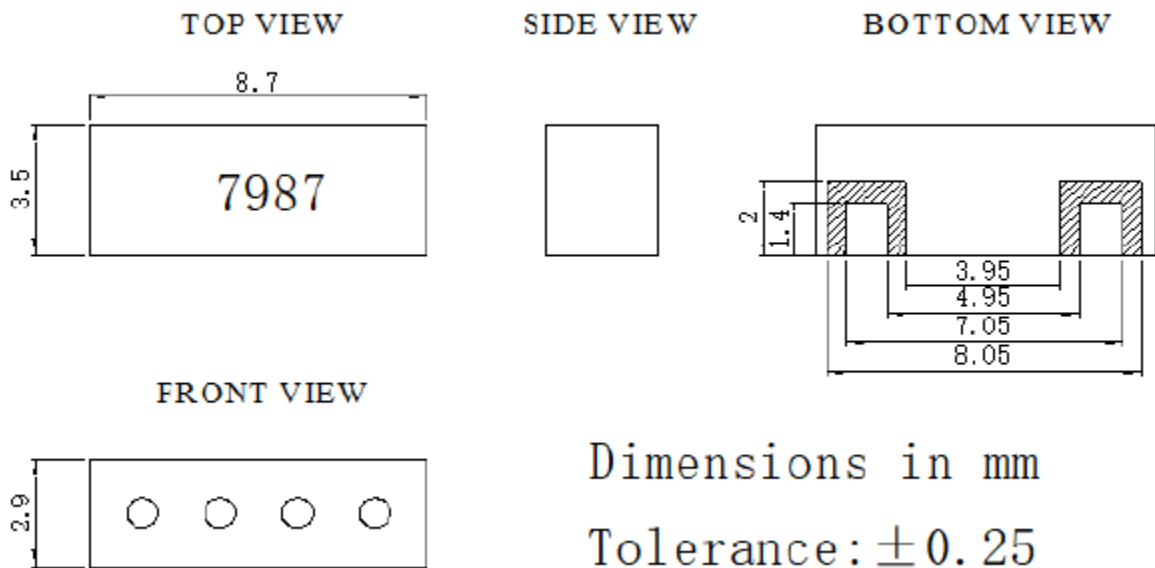
### B. Electrical Characteristics:

ITEM		SPECIFICATION
CENTER FREQUENCY	7737.2~8237.2 MHz	7987.2 MHz
INSERTION LOSS	7737.2~8237.2 MHz	2.0 dB (max)
RIPPLE	7737.2~8237.2 MHz	1.0 dB (max)
RETURN LOSS	7737.2~8237.2 MHz	9.6 dB (min)
ATTENUATION	5150~7135 MHz	30 dB (min)

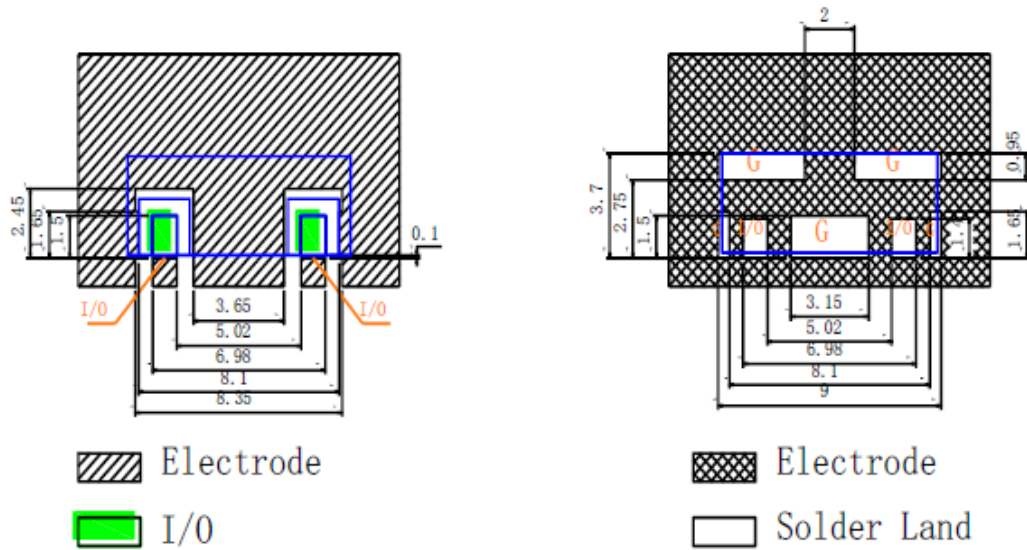
### C. Frequency Characteristics:



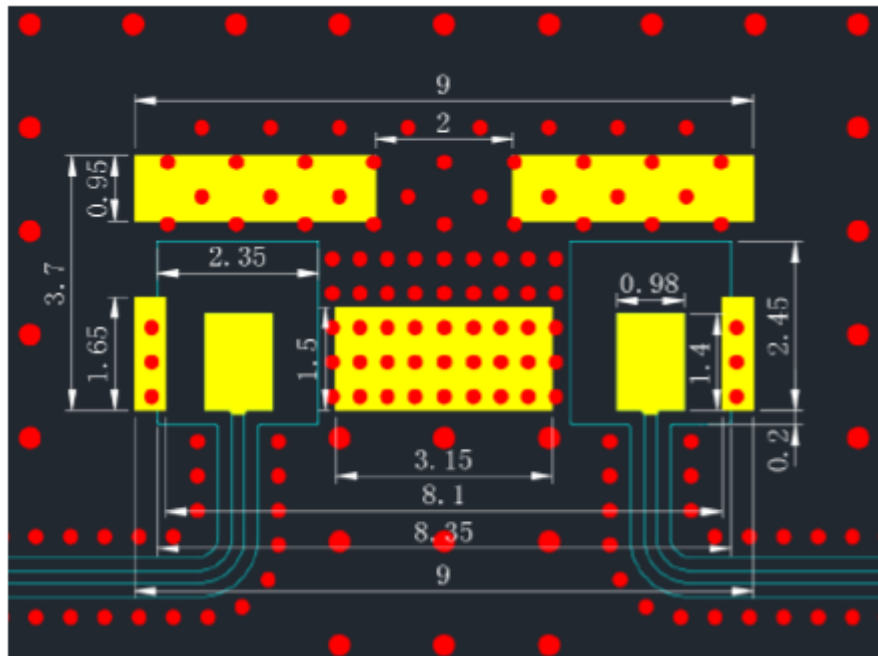
### D. Dimension:



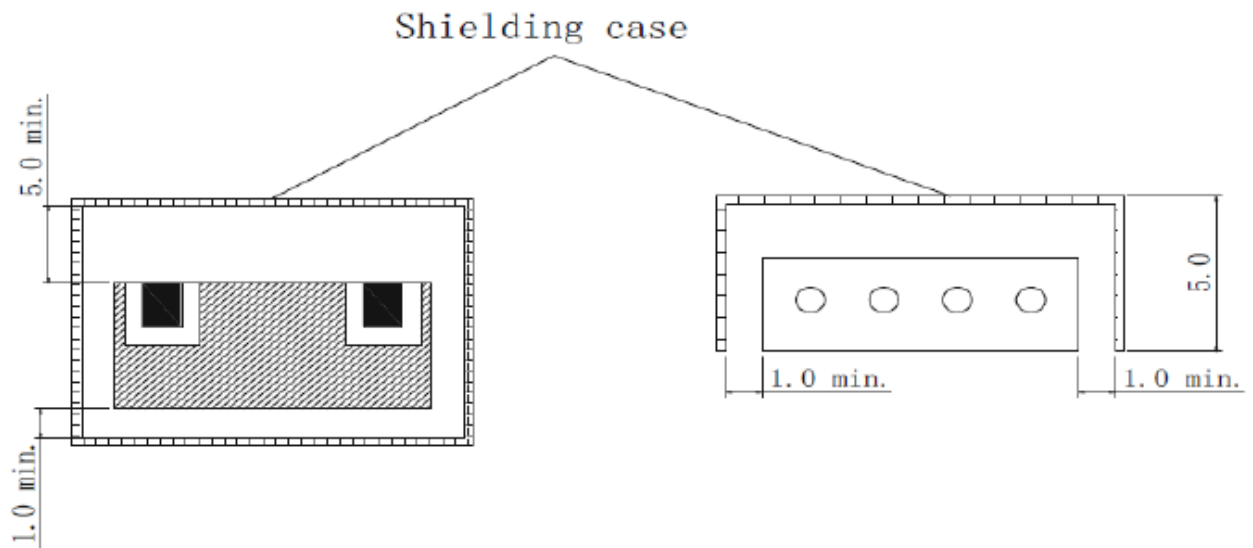
**E. PCB Footprint:**



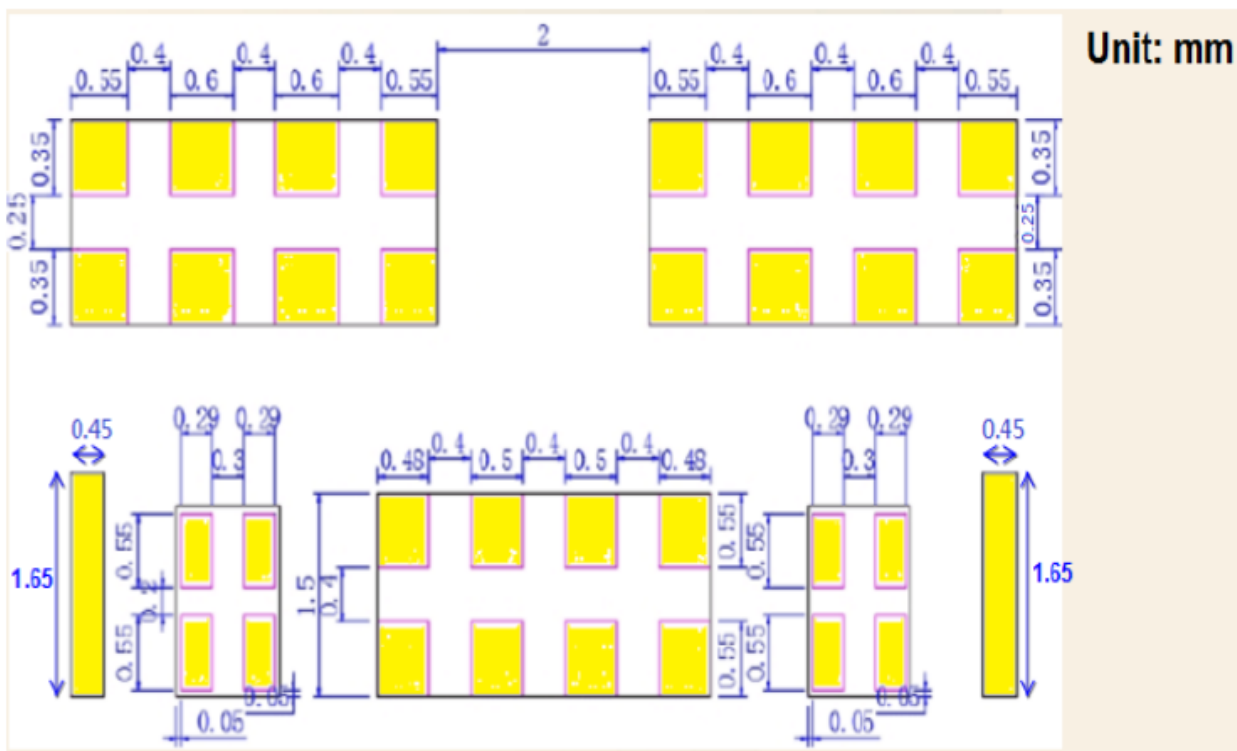
NOTE: Suggesting the thickness of I/O area(I/O Pads and Gap) to ground layer are greater than 0.5mm.



**Shielding case layout guide ( min ) :**



**The recommended printing screen in SMT process:**

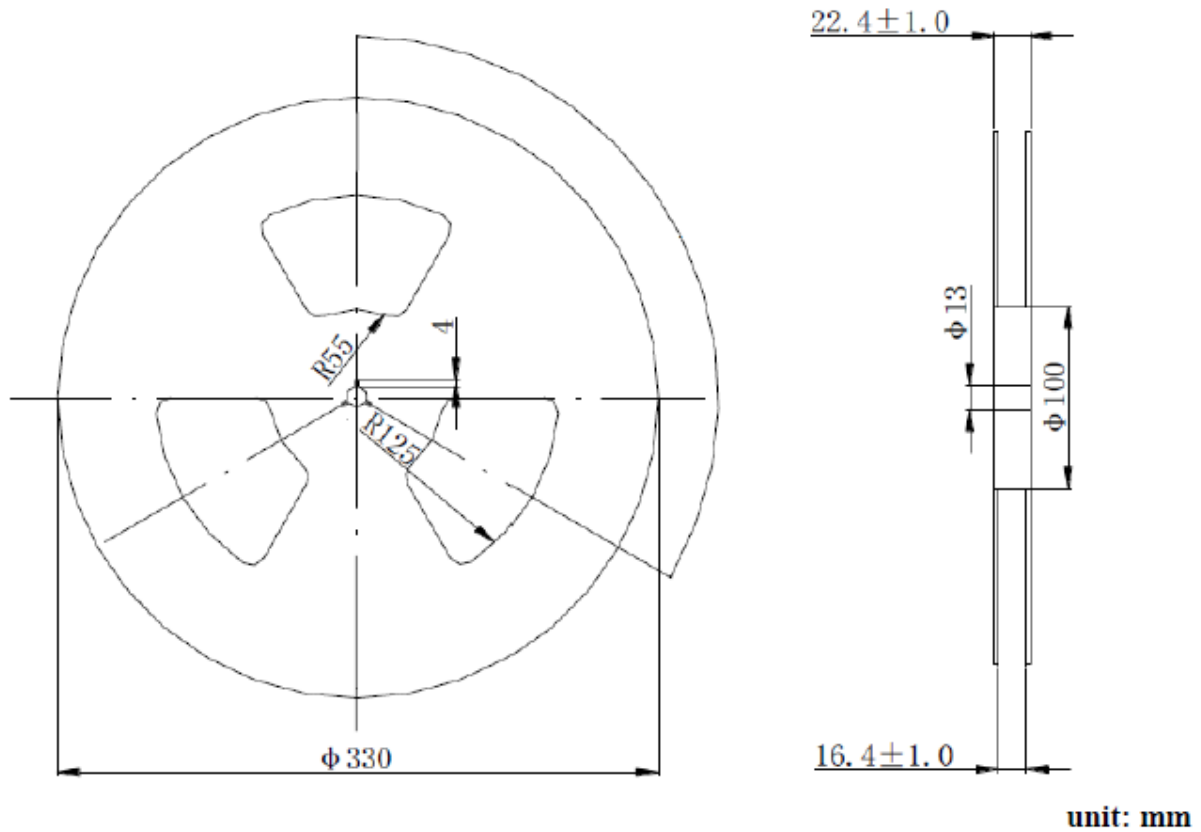


- Using the grid printing screen in SMT.
- Reducing the variation of performance after SMT due to much solder paste.
- The yellow area are filled in the solder paste.
- The screen footprint size are the same with the land pad of component.
- The printing screen thickness is 0.1mm.

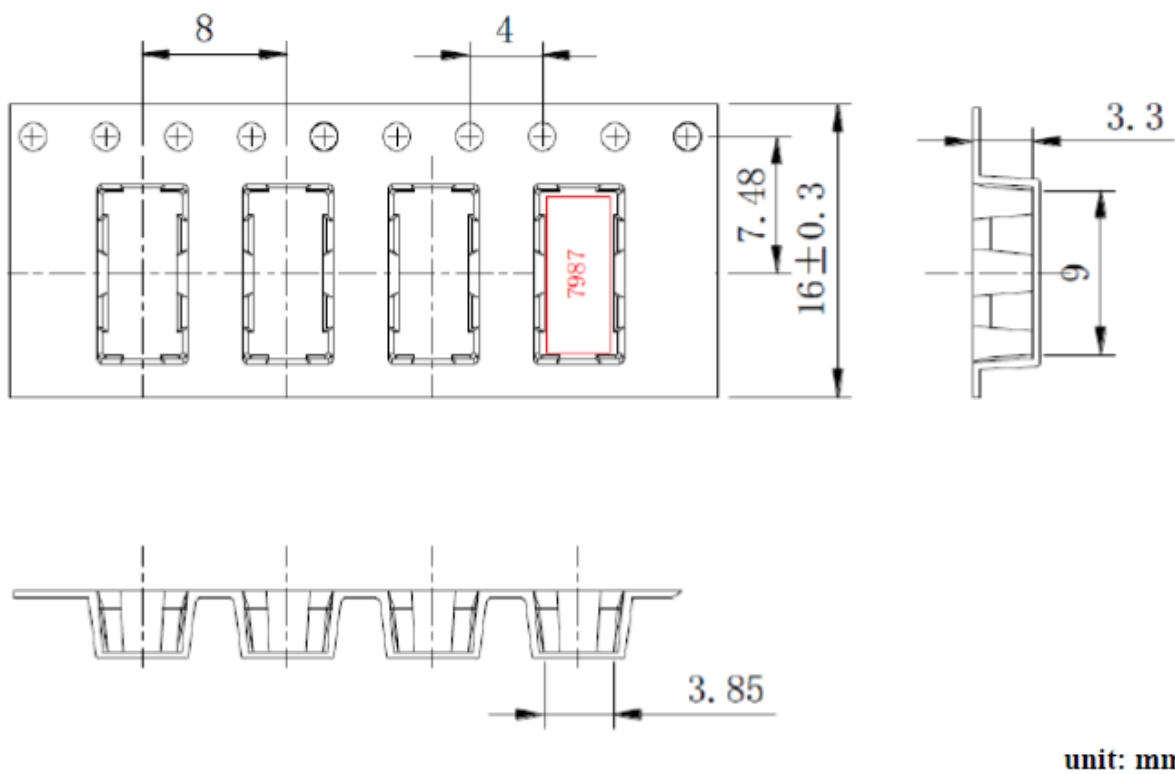
**F.Packing:**

1.Reel Dimension:

(2000pcs/ Reel)

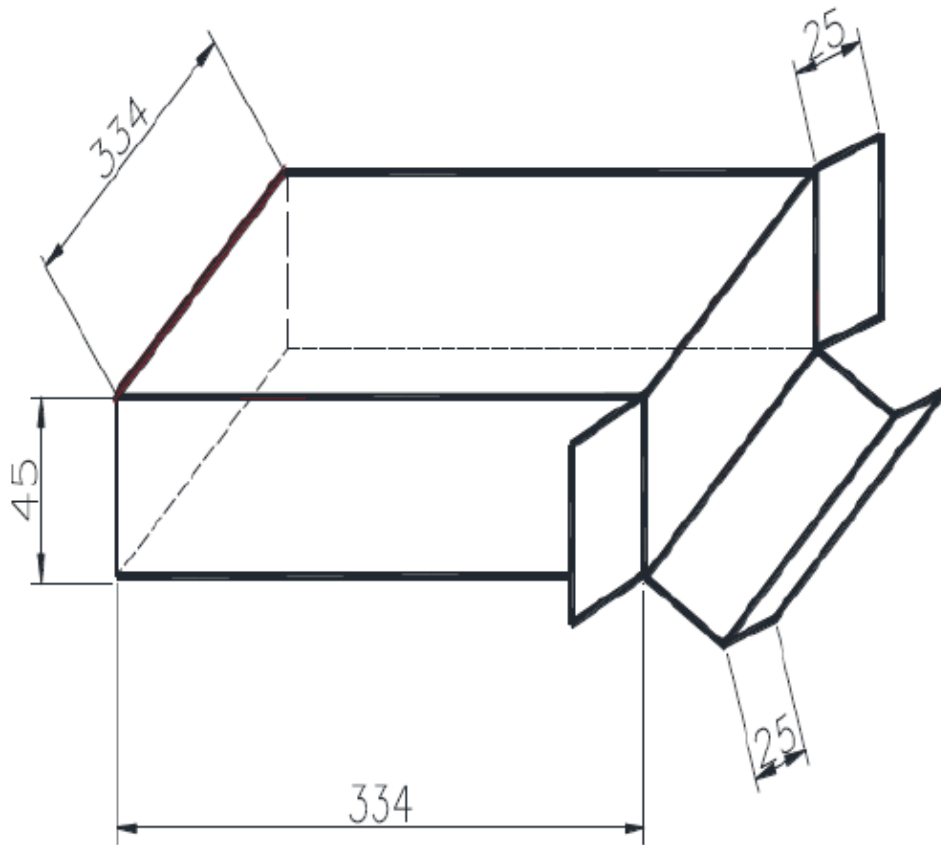


2.Tape Dimension:



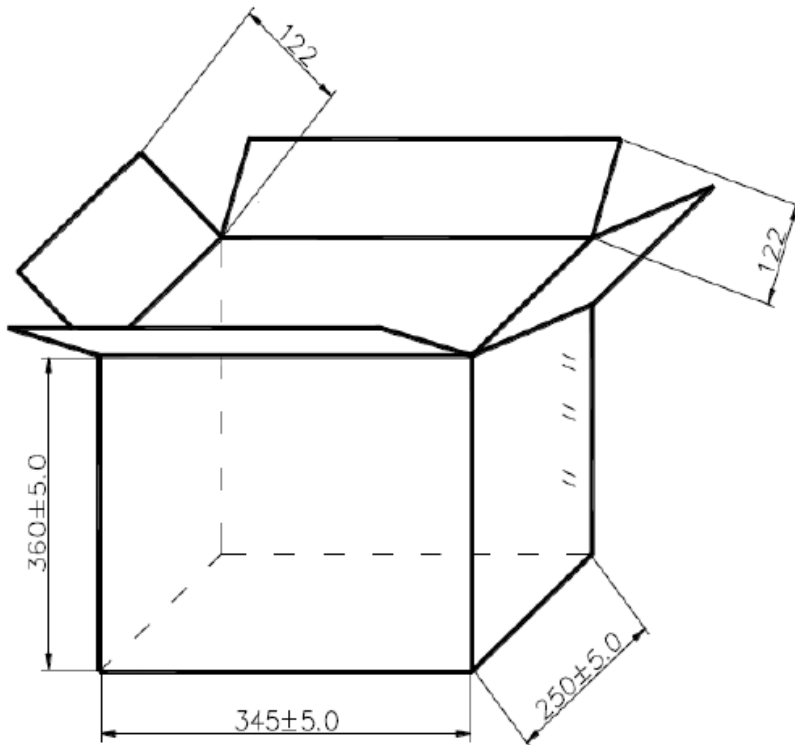
3.Package style:

(2Reel/ Inner Carton)



unit: mm

(5 Inner Carton / Outer Carton)



unit: mm

### G. Recommended Reflow Profile:

Products can be assembled following Pb-free assembly. According to the Standard **IPC/JEDEC J-STD-020C**, the temperature profile suggested is as follow:

Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min( $T_{smin}$ ) -Temperature Max( $T_{smax}$ ) -Time( $t_s$ ) form ( $T_{smin}$ to $T_{smax}$ )	150°C 200°C 60-180 seconds
RAMP-UP	Avg. Ramp-up Rate ( $T_{smax}$ to TP)	3°C/second max
REFLOW	-Temperature( $T_L$ ) -Total Time above $T_L$ ( $t_L$ )	217°C 60-150 seconds
PEAK	-Temperature( $T_P$ ) -Time( $t_p$ )	260°C 20-40 second
RAMP-DOWN	Rate	6°C/ second max
Time from 25°C to Peak Temperature		8 minutes max
Composition of solder paste		96.5Sn/3Ag/0.5Cu
Solder Paste Model		SHENMAO PF606-P26

Note : All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.

The graphic shows temperature profile for component assembly process in reflow ovens

