



# 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: SAW Resonator 315 MHz SMD 3.0X3.0 mm

TST Part No.: TC0274D

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: \_\_\_\_\_ 2019/04/25

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 changes.

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## SAW Resonator 315MHz

MODEL NO.: TC0274D

REV. NO.:2.0

### A. FEATURES:

1. 1-Port Resonator.

### B. MAXIMUM RATING:

1. Input Power Level: 0 dBm

2. DC voltage: 5 V

3. Operating Temperature: -40°C to +85°C

4. Storage Temperature: -40°C to +85°C

5. Moisture Sensitive Level: Level 1 (MSL1)

RoHS Compliant  
Lead free  
Lead-free soldering

### C. ELECTRICAL CHARACTERISTICS:

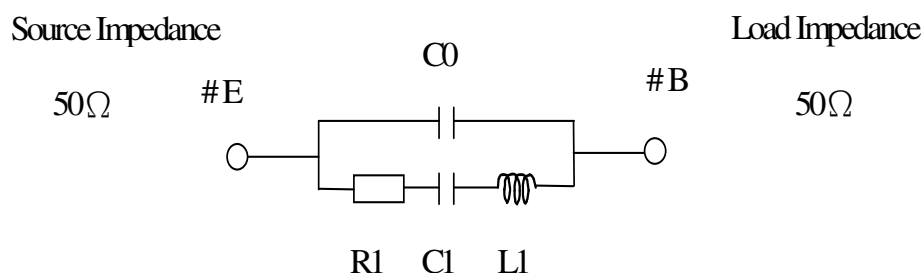
Reference Temperature  $T_A=25^\circ\text{C}$

Characteristic	Units	Minimum	Typical	Maximum
Center frequency <b>F<sub>c</sub></b>	<b>MHz</b>	314.950	315	315.050
Insertion Loss <b>IL</b>	<b>dB</b>	-	1.5	2.5
Unload quality factor <b>Q<sub>u</sub></b>		-	8000	-
Ageing of f <sub>c</sub>	<b>ppm/yr</b>	-	-	±10
Motional capacitance <b>C1</b>	<b>fF</b>	-	2.89	-
Motional inductance <b>L1</b>	<b>μH</b>	-	87.5	-
Motional resistance <b>R1</b>	<b>Ohm</b>	-	20.2	-
Parallel capacitance <b>C<sub>o</sub></b>	<b>pF</b>	-	4.14	-
Frequency Temperature coefficient (TC <sub>f</sub> )	<b>ppm/c*2</b>	-	0.032	-
Turnover T <sub>o</sub>	<b>deg.C</b>	-	25	-
Package size		SMD 3.0X3.0X1.1 mm		

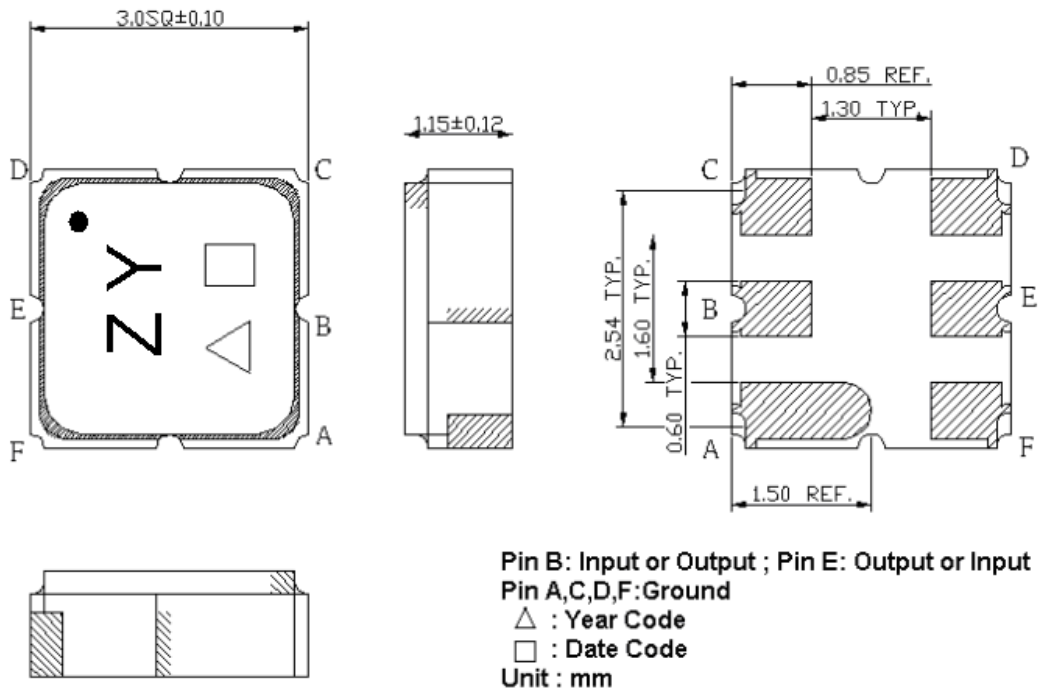
Temperature dependence of f<sub>c</sub>:  $f_c(T_A)=f_c(T_O)(1-TC_f(T_A-T_O)^2)$

### D. EQUIVRENT CIRCUIT:

One-Port Resonator:

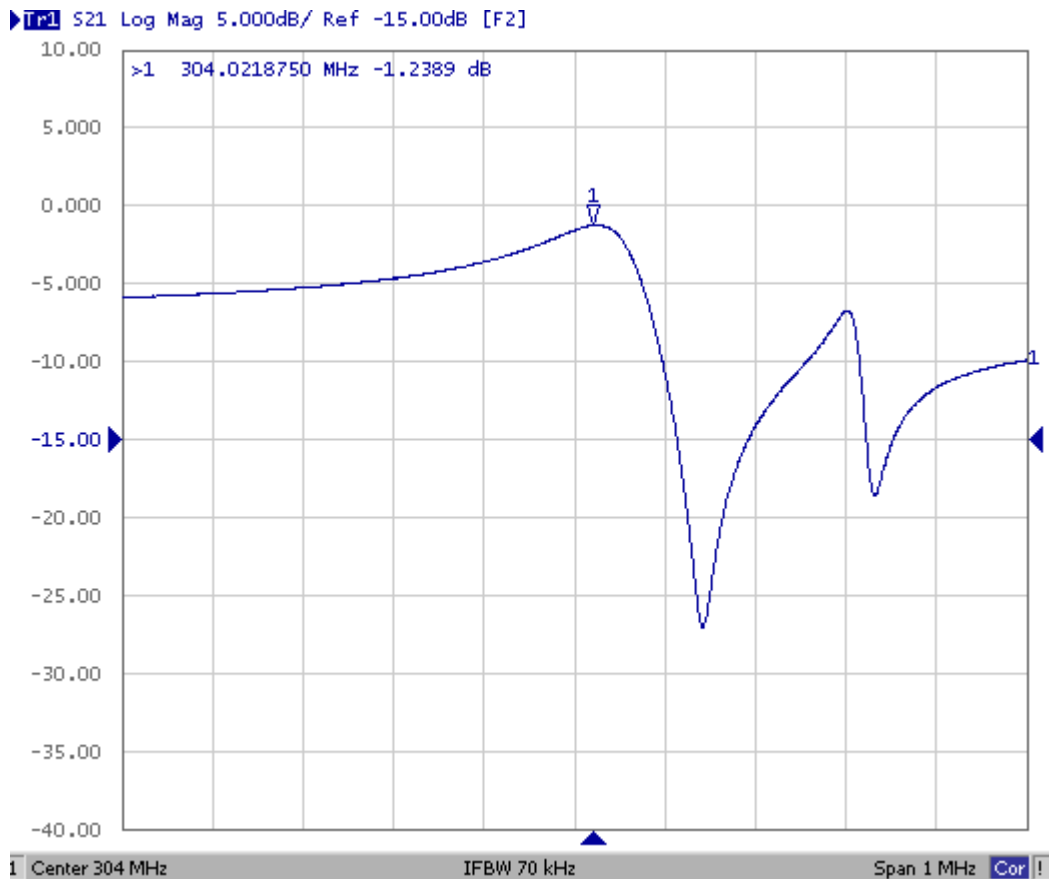


**E. OUTLINE DRAWING:**

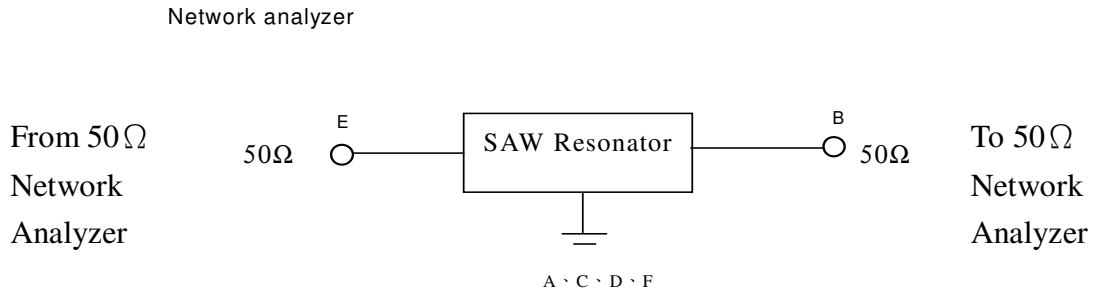


Date code: Provided by planer each year  
 Year code: 9 for 2009, 0 for 2010, 1 for 2011...

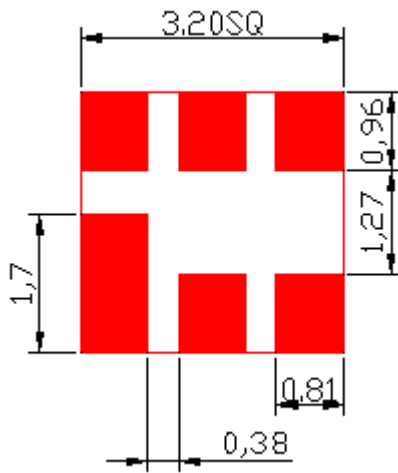
**F. FREQUENCY CHARACTERISTICS:**



G. TEST CIRCUIT:

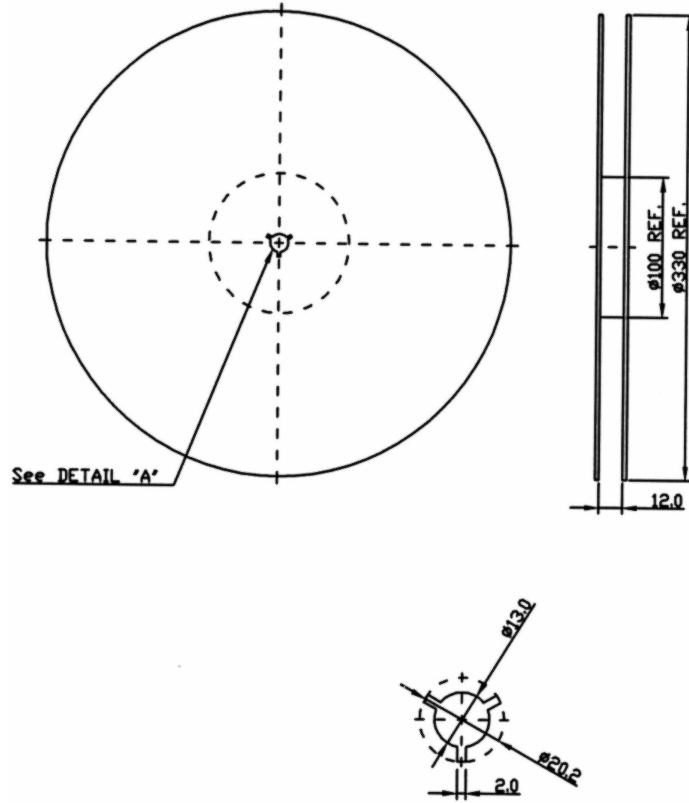


H. PCB FOOTPRINT:

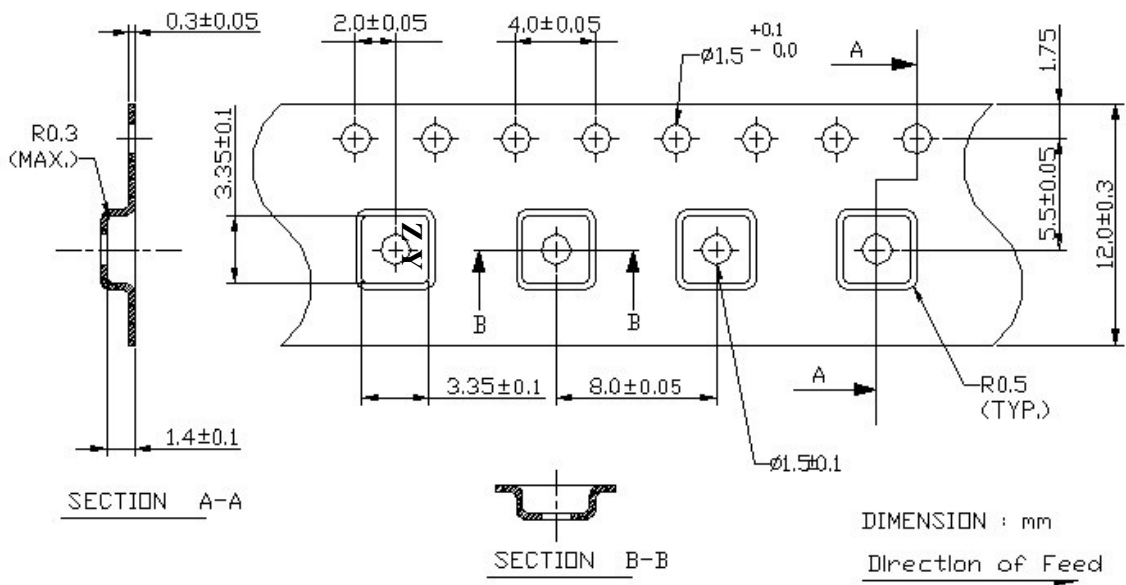


G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



**J. RECOMMENDED REFLOW PROFILE:**

