



# TAI-SAW TECHNOLOGY CO., LTD.

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

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: [tstsales@mail.taisaw.com](mailto:tstsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## Product Specifications Approval Sheet

Product Description: 1568.979 MHz SMD 3.0 x 3.0 mm SAW Resonator

TST Parts No.: TC0663A

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

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

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

Approval 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



# TAI-SAW TECHNOLOGY CO., LTD.

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

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: [tstsales3@mail.taisaw.com](mailto:tstsales3@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## SAW Resonator 1568.979 MHz

MODEL NO.: TC0663A

Rev. NO. 2.0

### A. MAXIMUM RATING:

1. Input Power Level: 0 dBm
2. DC voltage: 0 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitive Level (MSL): Level 1

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device

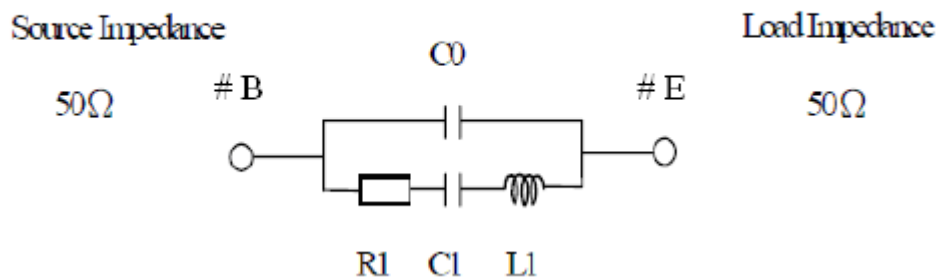
### B. ELECTRICAL CHARACTERISTICS:

Characteristic	Units	Min	Typ	Max
Center frequency <b>F<sub>c</sub></b>	<b>MHz</b>	1568.679	1568.979	1569.279
Insertion Loss <b>IL</b>	<b>dB</b>		1.2	2.5
Unload Quality Factor	-	..	5000	
Motional Capacitance <b>C<sub>1</sub></b>	<b>fF</b>		5.22	
Motional Inductance <b>L<sub>1</sub></b>	<b>μH</b>		1.97	
Motional Resistance <b>R<sub>1</sub></b>	<b>Ohm</b>		3.88	
Parallel Capacitance <b>C<sub>0</sub></b>	<b>pF</b>		2.42	
Frequency Temperature coefficient	<b>ppm / °C</b>	.	-0.05	
Turnover T <sub>0</sub>	<b>°C</b>	10	25	40
Package size	<b>mm</b>	SMD 3.0 x 3.0		

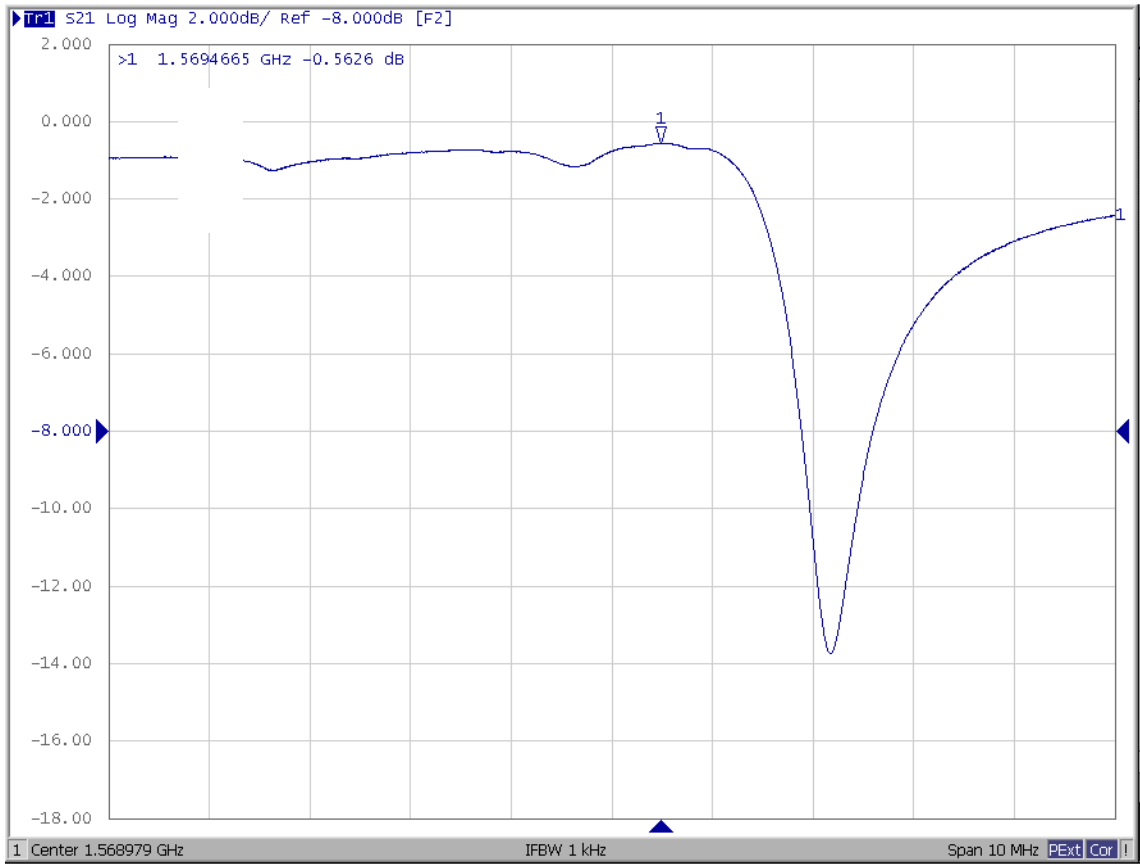
--Temperature dependence of fc:  $f_c(T_A) = f_c(T_0)(1 - TC_f(T_A - T_0)^2)$

### C. EQUIVRENT CIRCUIT:

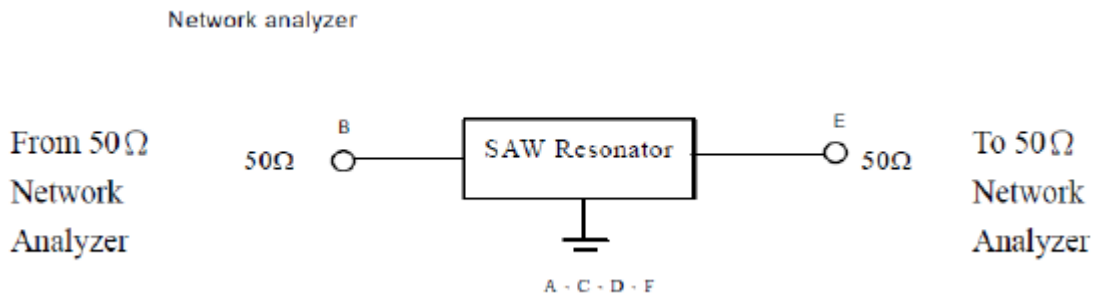
One-Port Resonator:



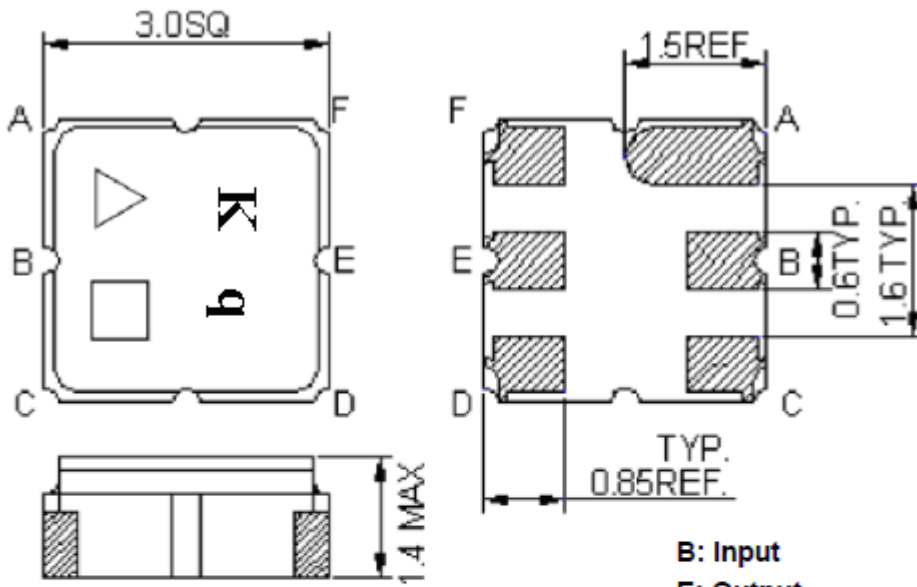
### D. FREQUENCY CHARACTERISTICS:



### E. TEST CIRCUIT:



**F. OUTLINE DRAWING**



**B: Input**  
**E: Output**  
**A, C, D, F: Ground**

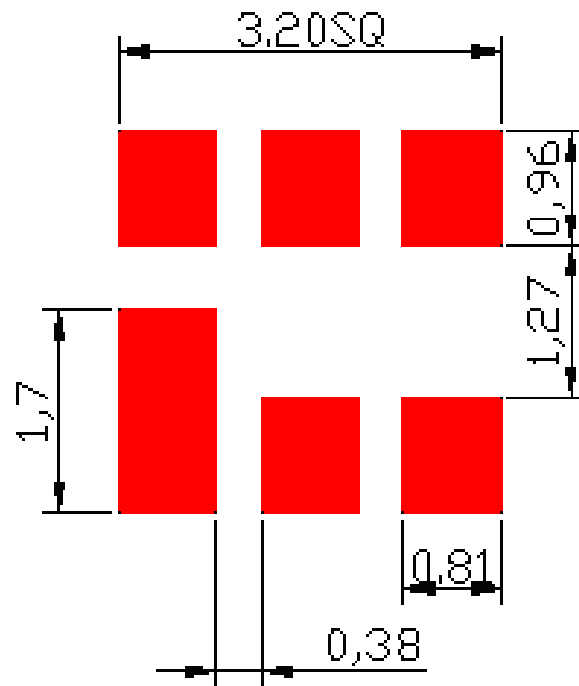
△ : Year Code (2009->9, 2010->0, ..., 2018->8)

□ : Date Code (Follow the table from planner each year)

**Unit: mm**

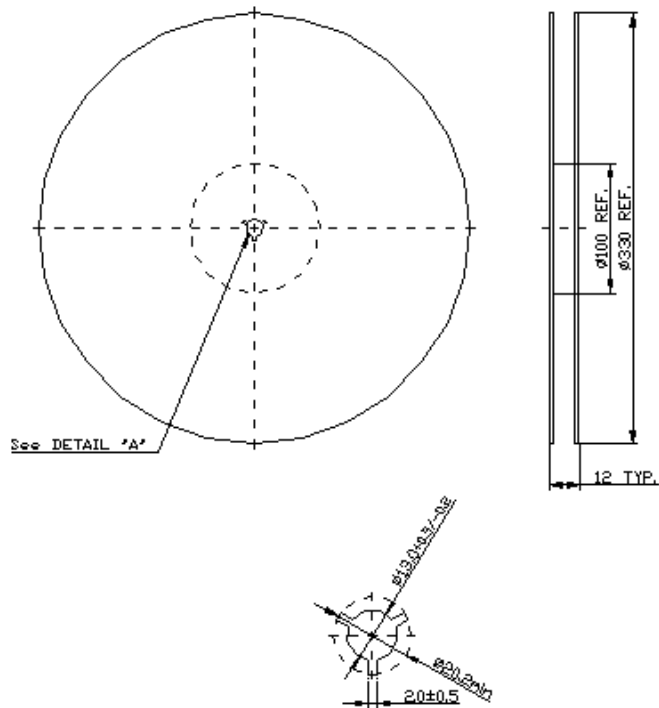
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

**G. PCB FOOTPRINT:**

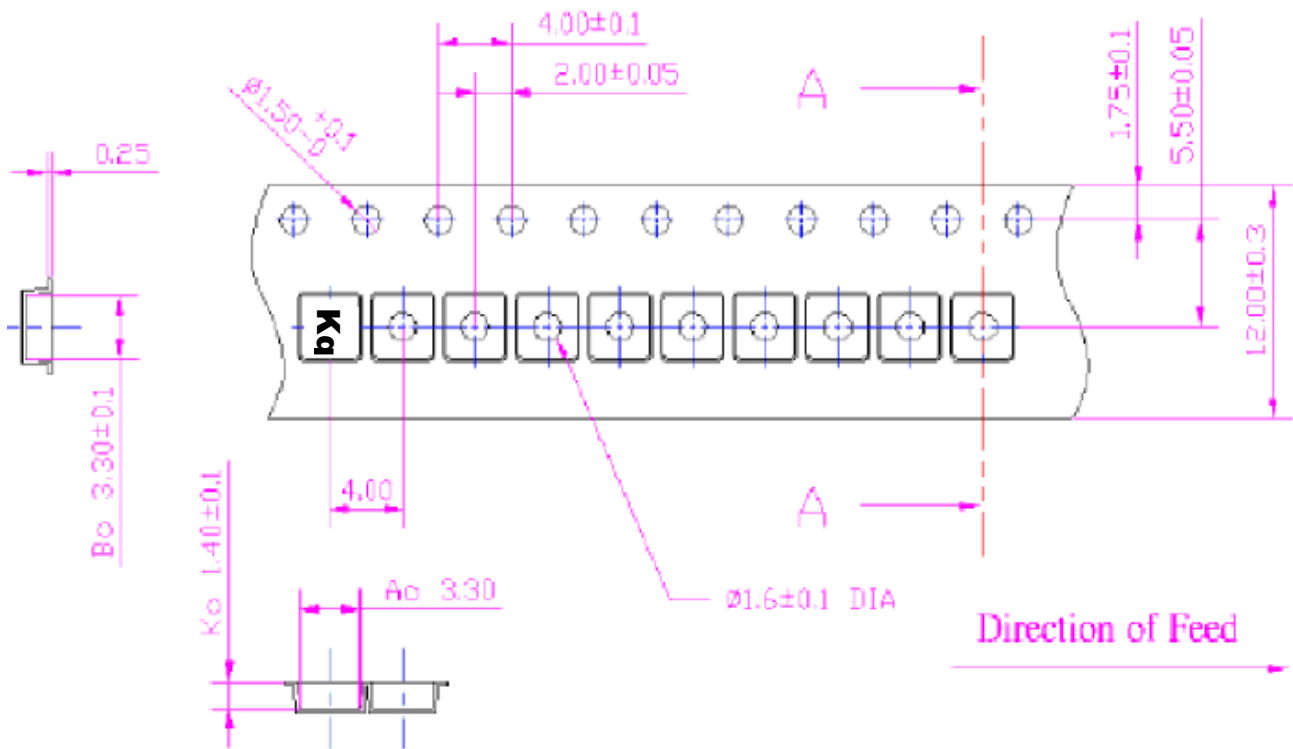


**H. PACKING:**

1. REEL DIMENSION (Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



### I. RECOMMENDED REFLOW PROFILE:

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

