



# 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)

## Approval Sheet for Product Specification

Issued Date:

Product Name: SAW Resonator 644.60859 MHz SMD 3.8X3.8 mm

TST Parts No.: TC0264A

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

Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Asin Lin

Approval by: \_\_\_\_\_ Francis Chen

Date: \_\_\_\_\_ 2004/12/17



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## SAW Resonator 644.60859 MHz

Model No.: TC0264A

Rev. No.:1

### A. Features:

- 1-Port Resonator.

RoHS Compliant  
Lead free  
Lead-free soldering

### B. Maximum Rating:

1. Input Power Level: 0 dBm
2. DC voltage: 12 V
3. Operating Temperature: -40 °C to +85 °C
4. Storage Temperature: -40 °C to +85 °C

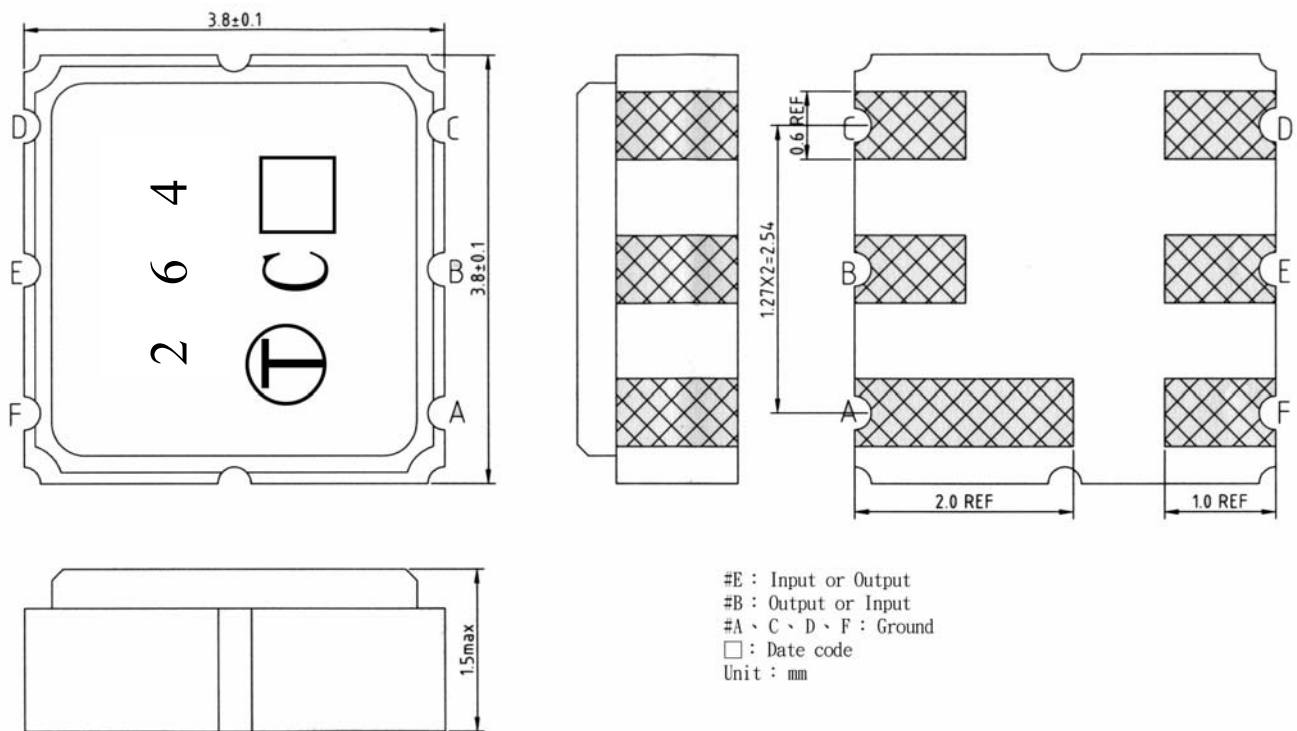
### C. Electrical Characteristics:

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

Characteristic	Units	Minimum	Typical	Maximum
Nominal Frequency, $f_c$	<b>MHz</b>	644.57859	644.60859	644.63859
Insertion Loss, <b>IL</b>	<b>dB</b>	-	1.1	2.5
Aging of $f_c$	<b>ppm/ yr</b>	-		$\pm 10$
Equivalent Circuit Model				
Motional Capacitance, $C_m$	<b>fF</b>	-	1.705	-
Motional Inductance, $L_m$	<b><math>\mu\text{H}</math></b>	-	35.74	-
Motional Resistance, $R_m$	<b><math>\Omega</math></b>	-	14.87	-
Shunt Static Capacitance, $C_o$	<b>pF</b>	-	2.89	-
Temp. Coefficient.	<b>ppm/ <math>^\circ\text{C}^2</math></b>	-	0.032	-
Turnover Temperature, $T_o$	<b><math>^\circ\text{C}</math></b>	10	25	40
Package size		SMD 3.8x3.8x1.2 mm		

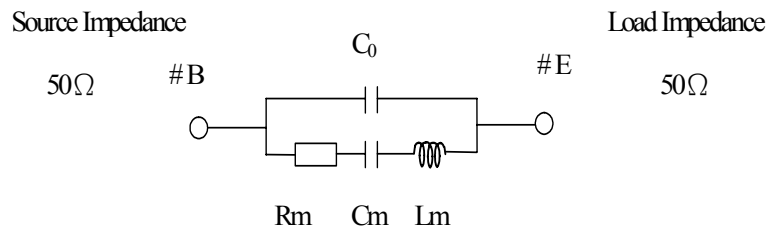
Temperature dependence of  $f_c$ :  $f_c(T_A)=f_c(T_O)(1+TC_f(T_A-T_O)^2)$

D. Outline Drawing:

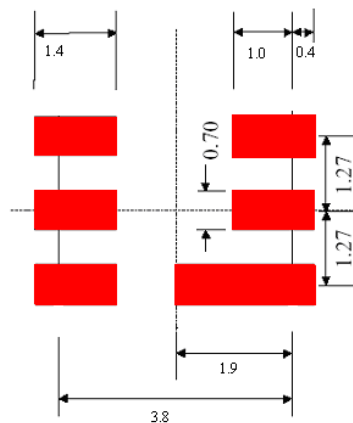


E. Equivalent Circuit Model:

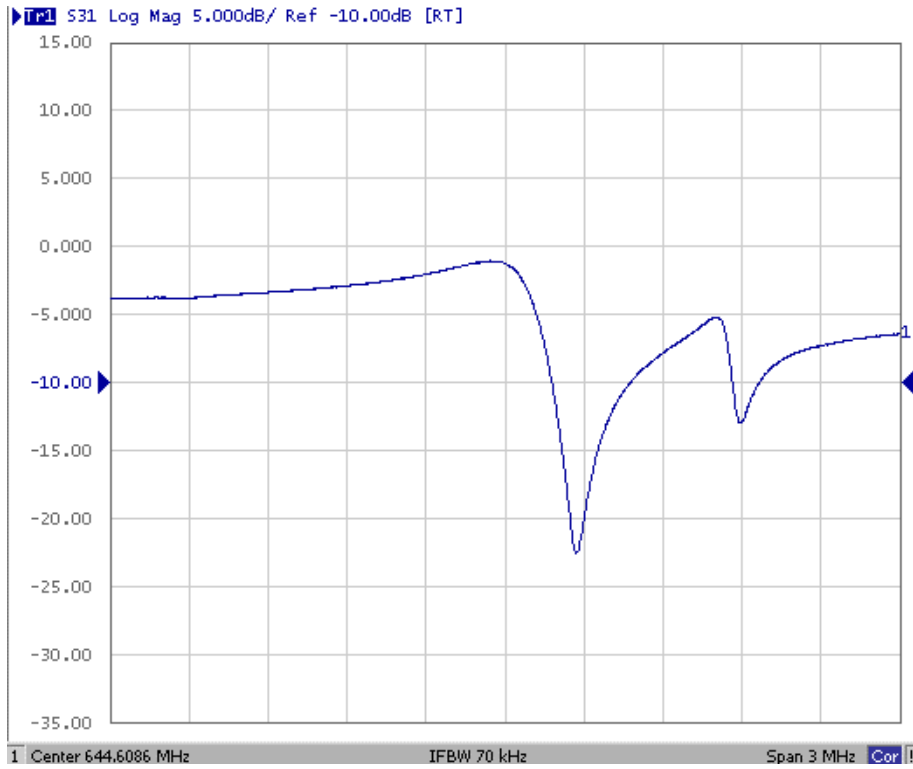
One-Port Resonator:



F. PCB FOOTPRINT



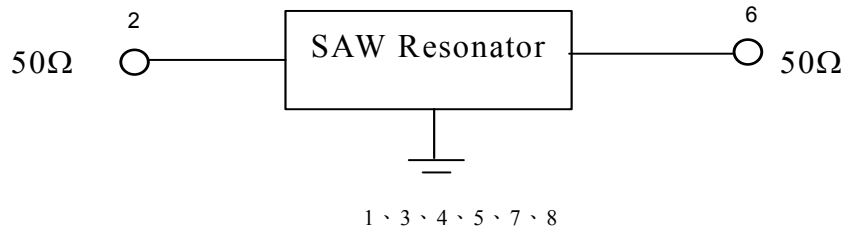
### G. Frequency Characteristics:



### H. Test Circuit:

Network analyzer

From 50Ω  
Network  
Analyzer



To 50Ω  
Network  
Analyzer

