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 Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: SAW Resonator 418 MHz SMD 3.8x3.8mm

TST Parts No.: TC0393A

Customer Parts No.:_____

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____Hong Pu Lin Hong Pu Lin_____

Approval by:_____Andy Yu Andy Yu_____

Date:_____2020/03/03_____

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 418 MHz

MODEL NO.: TC0393A Rev. NO. 1.0

A. MAXIMUM RATING:

1. Input Power Level: 0dBm
2. DC voltage: 12 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitivity Level: Level 1(**MSL1**)

RoHS Compliant

Lead-free soldering

Electrostatic **S**ensitive **D**evice

B. ELECTRICAL CHARACTERISTICS:

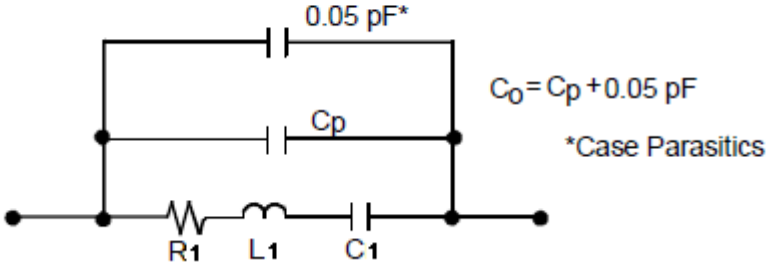
Characteristic	Units	Min	Type	Max
Center frequency	MHz	417.925	418	418.75
Insertion Loss	dB		1.3	2.0
Unloaded Q Factor	-		10400	
Motional Capacitance C1	fF		2.2	
Motional Inductance L1	μH		64.8	120
Motional Resistance R1	Ω		16.7	25
Parallel Capacitance Co	pF	2.2	2.4	2.8
Frequency Temperature coefficient (TC_f)	ppm/$^oC^2$		0.032	
Turnover To	^oC	10	25	40
Package size	mm		3.8 x 3.8	

*Frequency define by Yr(real) peak at room temperature.

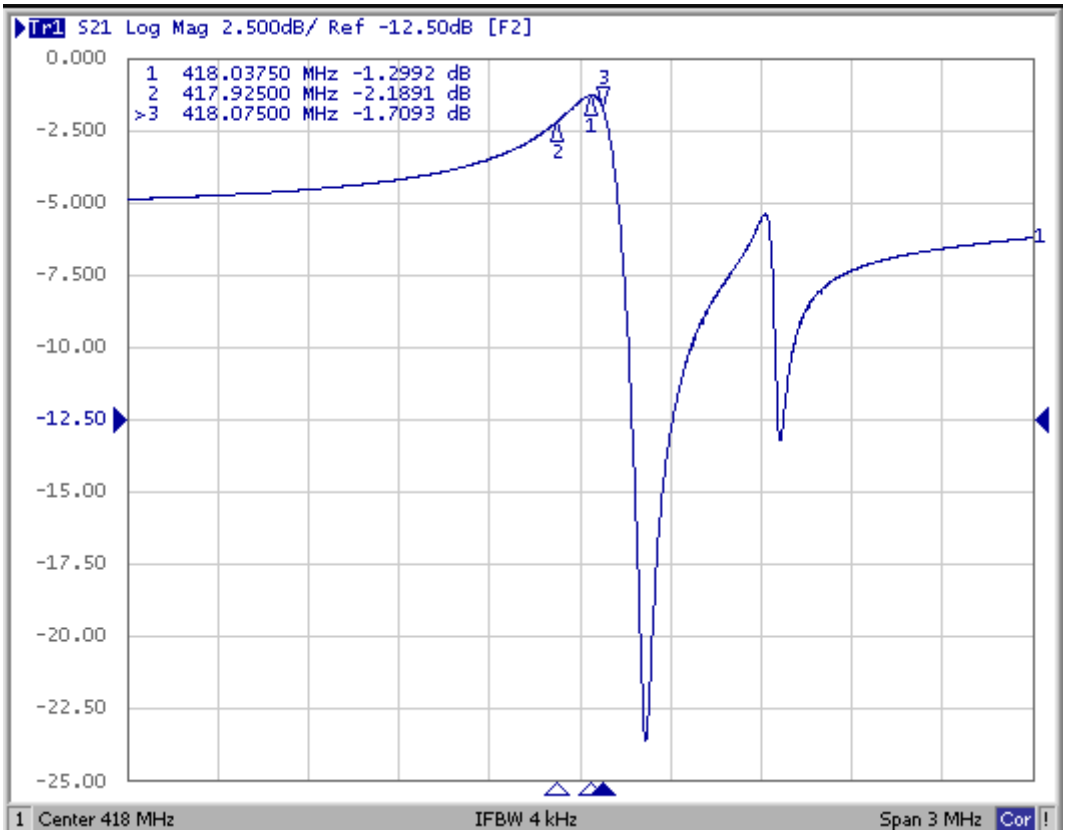
Temperature dependence of fc: $fc(T_A)=fc(T_O)(1-TC_f(T_A-T_O)^2)$

C. EQUVIRENT CIRCUIT:

Equivalent RLC Model

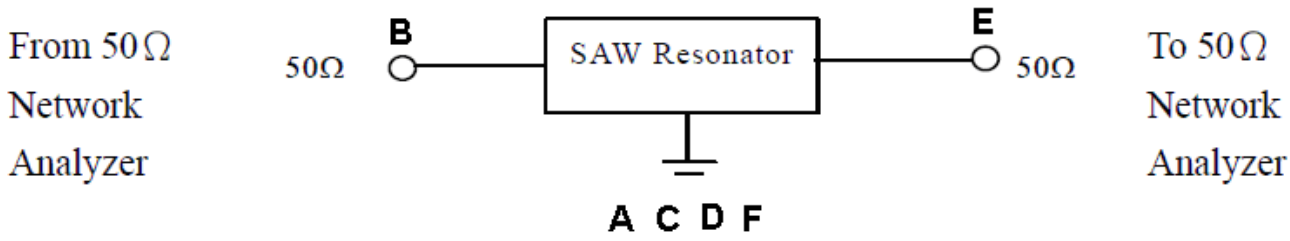


D. FREQUENCY CHARATERISTICS:

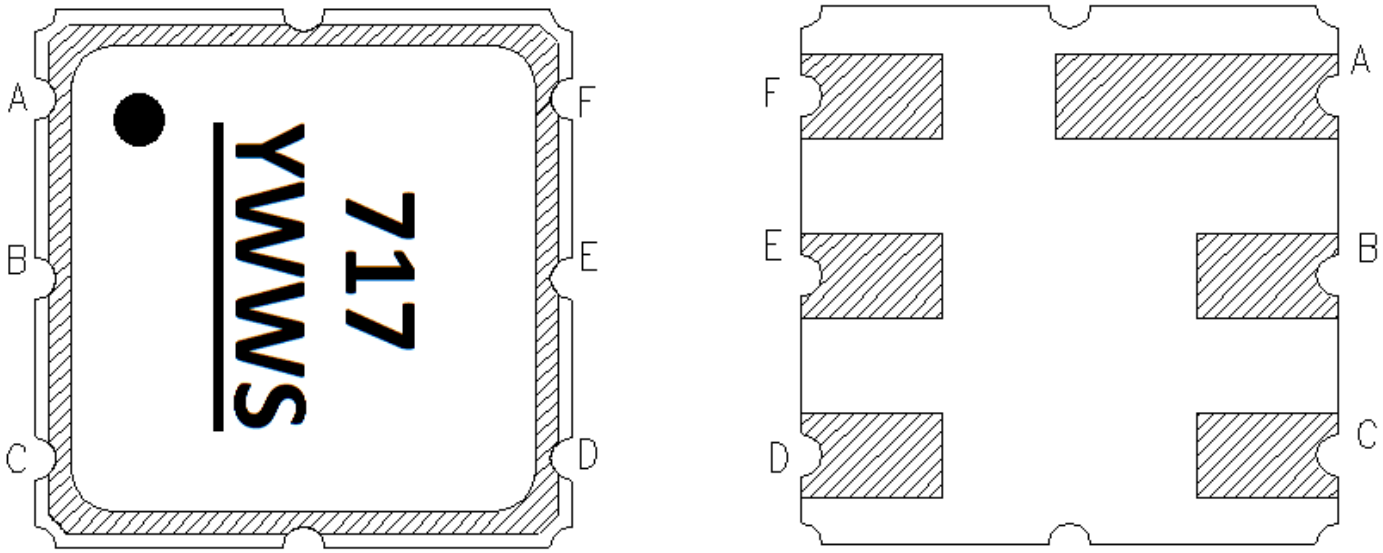


E. TEST CIRCUIT:

Network analyzer



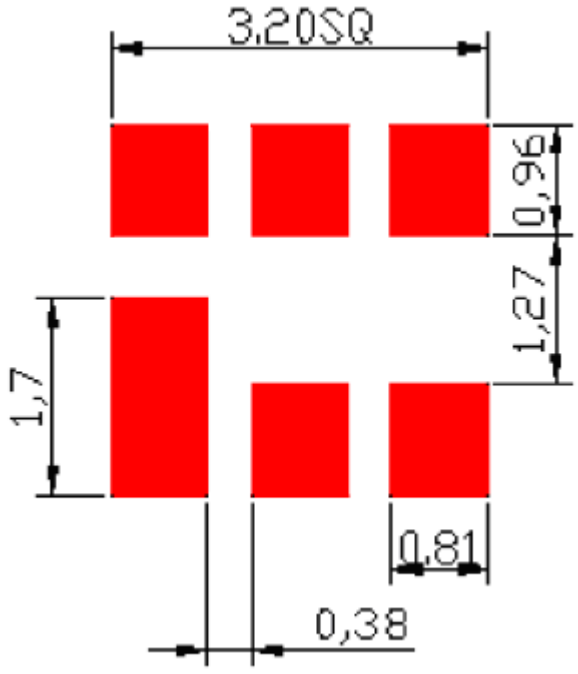
F. MECHANICAL DIMENSIONS:



•	pin 1 indicator
Y	year code
W W	week code
s	Shift code

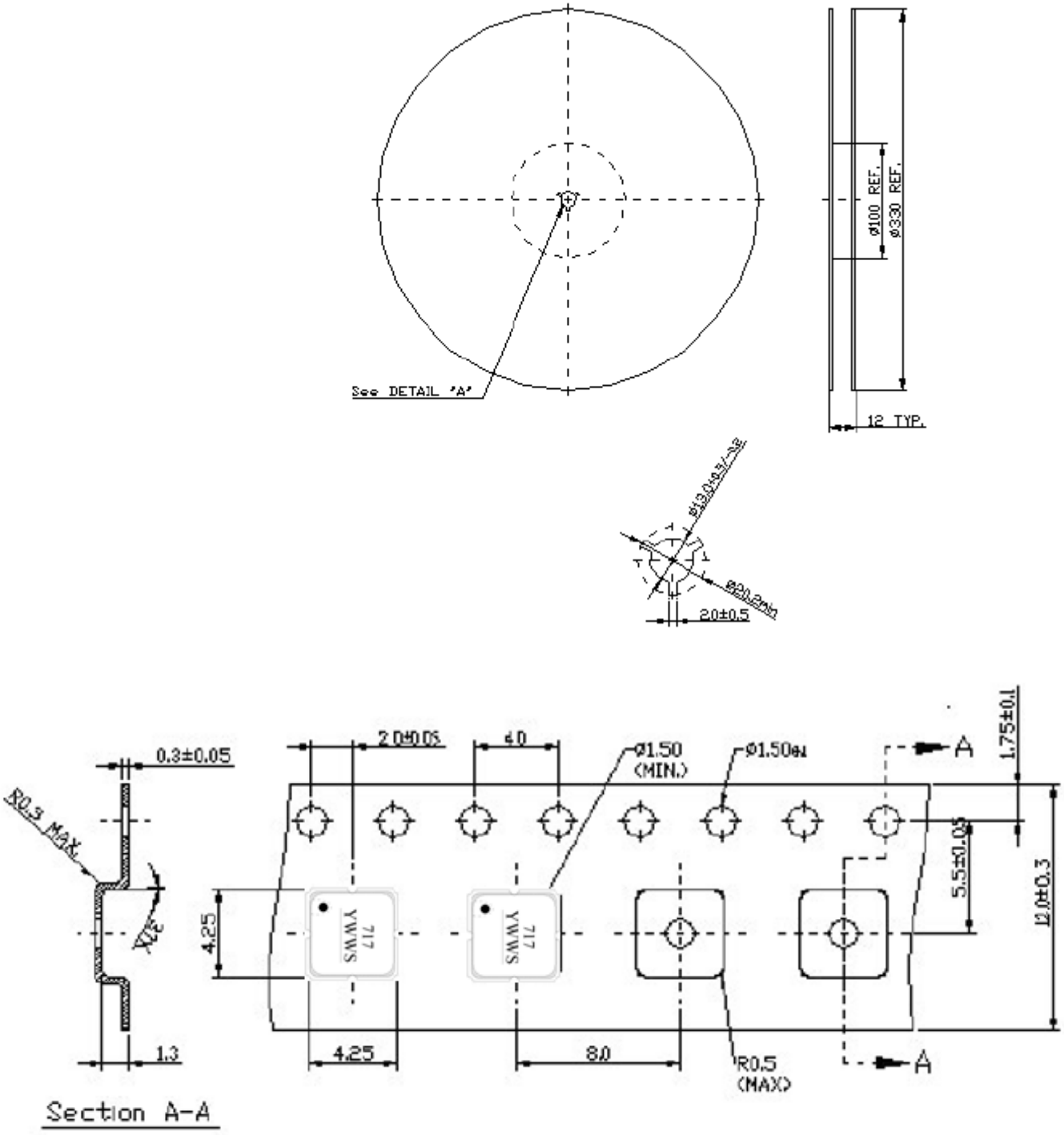
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
A Shift	**A**	**D**	**G**	**K**	**N**	**S**	**V**
B Shift	**B**	**E**	**H**	**L**	**P**	**T**	**W**
C Shift	**C**	**F**	**J**	**M**	**R**	**U**	**X**

G. PCB FOOTPRINT:



H. PACKING:

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



I. RECOMMENDED REFLOW PROFILE:

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

