

SAW Resonator 500 MHz (SMD 5.0x3.5mm)

MODEL NO.: TC0659A

REV. NO.4.0

RoHS Compliant
Lead free
Lead-free soldering

A. FEATURES:

1. 1-port Resonator.

B. MAXIMUM RATING:

1. Input Power Level : 10 dBm
2. DC Voltage : 5V
3. Operating temperature range: 0 °C to +80 °C
4. Storage temperature range: -40 °C to +125 °C
5. Moisture Sensitivity Level: Level 1 (MSL1)

Electrostatic Sensitive Device

C. ELECTRICAL CHARACTERISTICS:

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

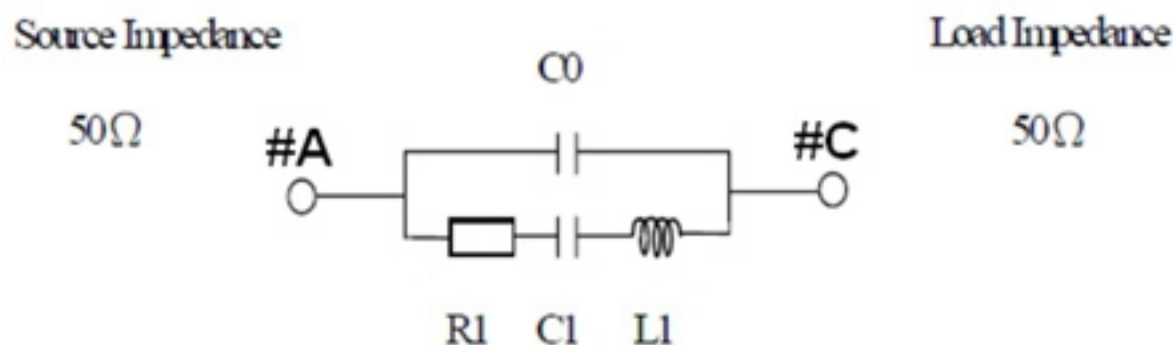
Item	Unit	Min.	Type.	Max.
Center Frequency*, Fc	MHz	499.975	500	500.025
Insertion Loss IL	dB	-	1.5	2.0
Equivalent Elements				
Unload Q Factor	-	10000	12100	-
Motional Capacitance C1	fF	-	1.45	-
Motional Inductance L1	μH	-	70.1	-
Motional Resistance R1	Ohm	-	18.1	-
Parallel Capacitance Co	pF	-	2.10	-
Frequency Temperature Coefficient**	ppm/°C²	-	-0.04	-
Turnover T_0	Deg.C	25	40	55
Package Size		SMD 5.0x3.5x1.5 mm		

*Center frequency measure by Yr 1-port with impedance analyzer

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

D. EQUIVRENT CIRCUIT:

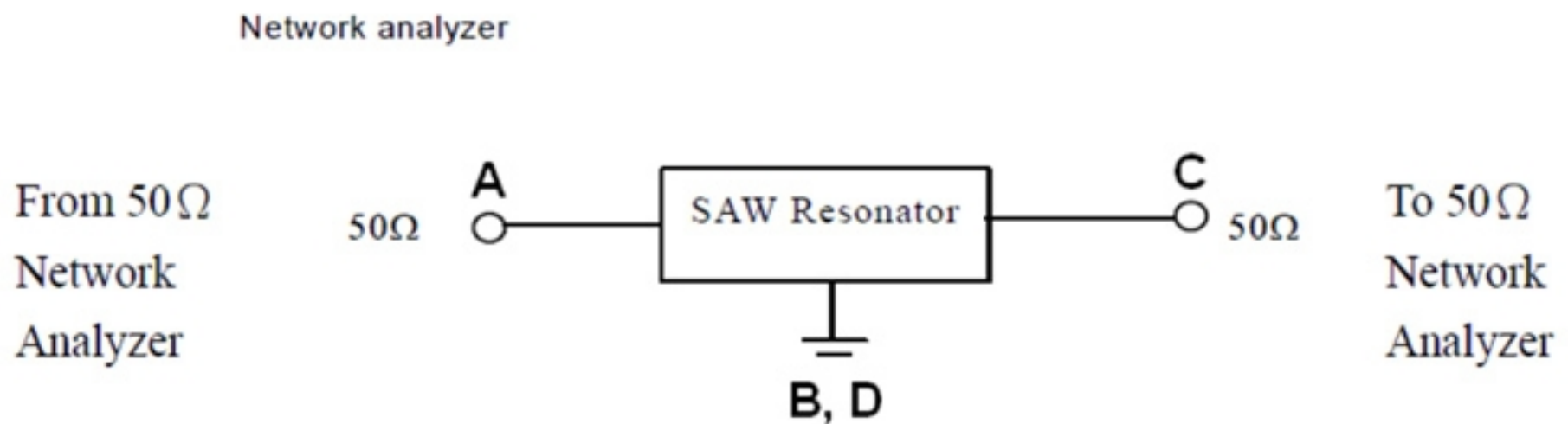
One-Port Resonator:



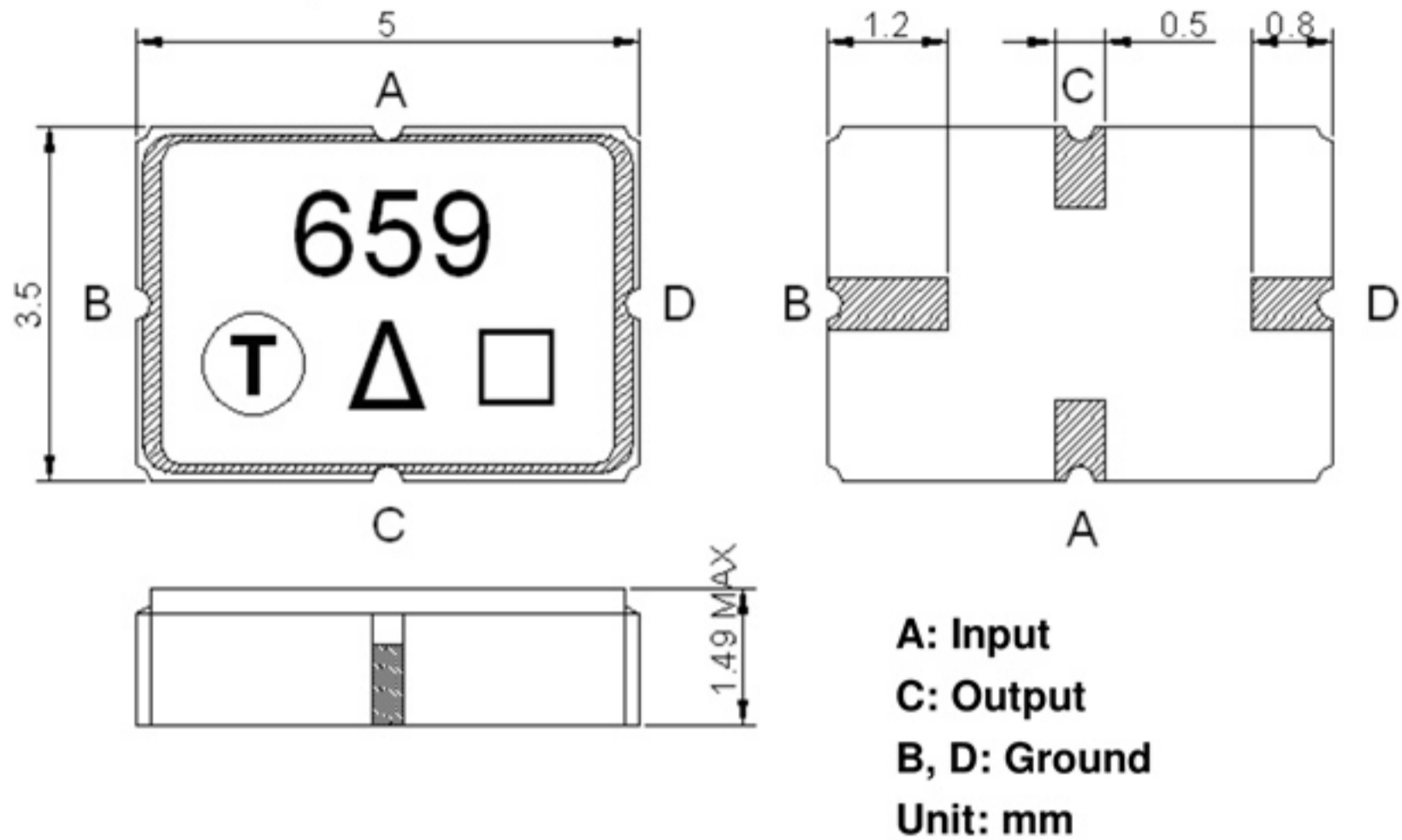
E. FREQUENCY CHARACTERISTICS:



F. TEST CIRCUIT:



G. OUTLINE DRAWING:

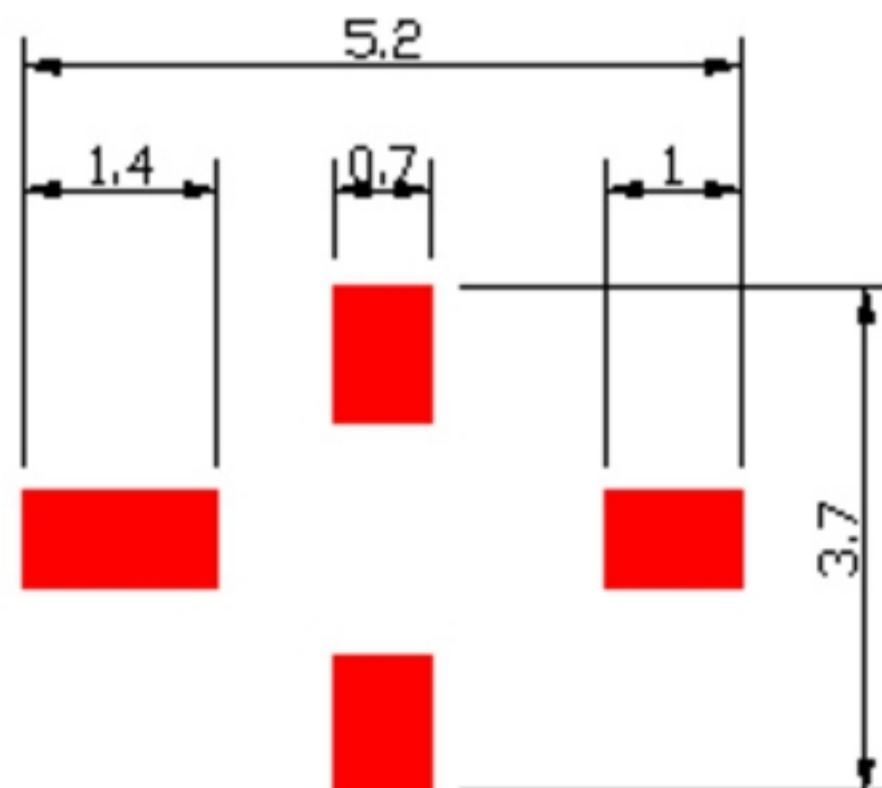


Δ Year Code: For odd year “C” for even year “c”

□ Week Code: Follow below table.

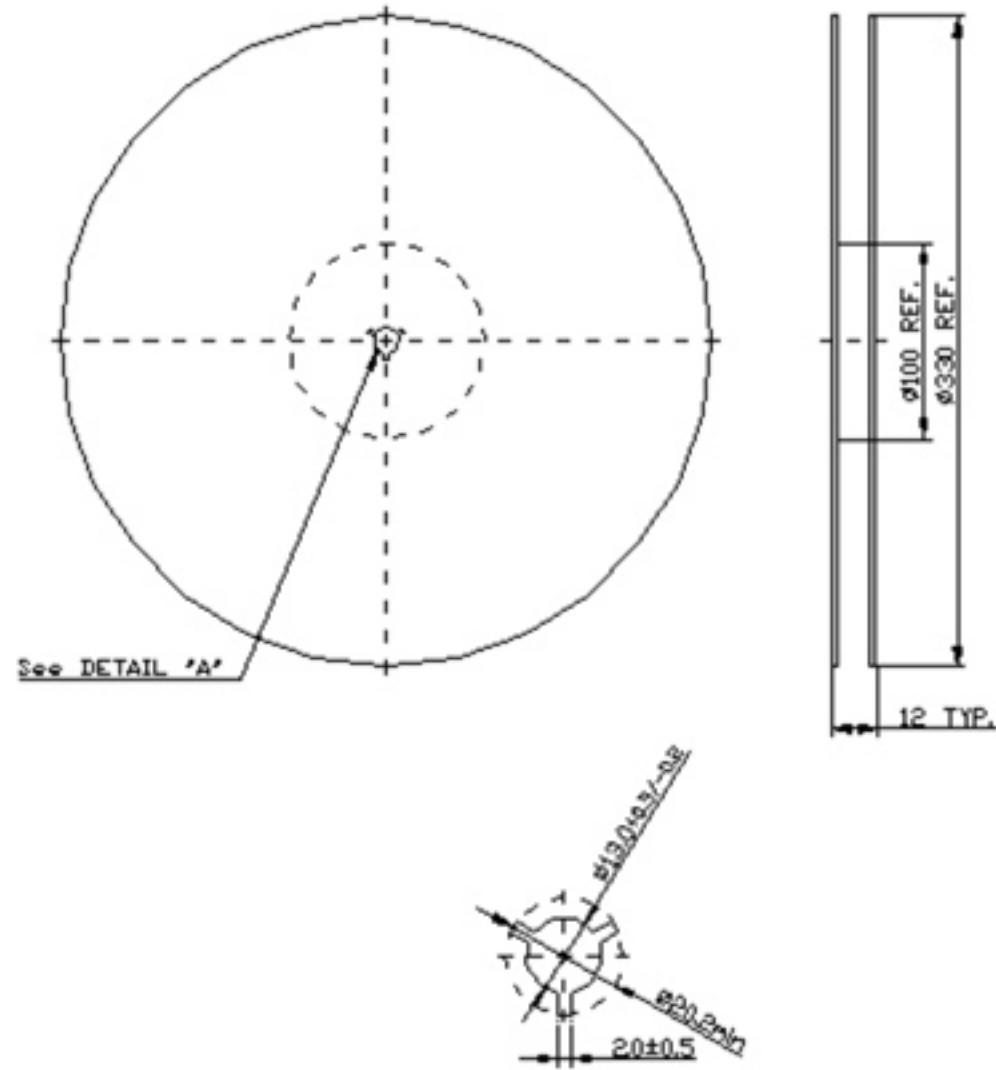
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45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

H. PCB FOOTPRINT:

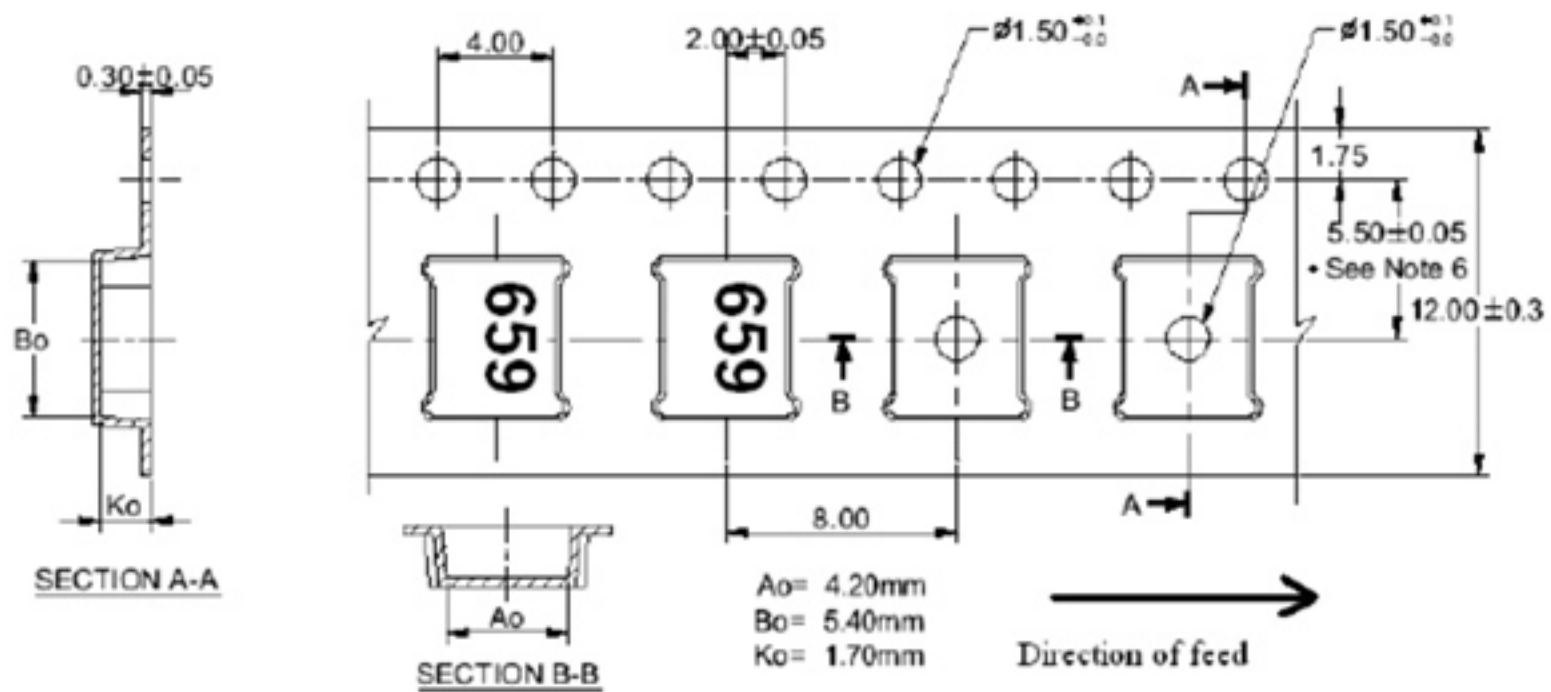


I. PACKING:

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



2. TAPE DIMENSION



J. RECOMMENDED REFLOW PROFILE:

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

