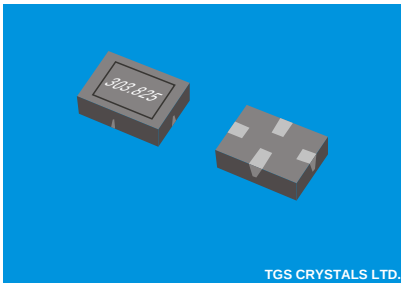
SMD SAW RESONATORS

SR303.825-M2

FEATURES

- The SR303.825-M2 is a true one-port, Surface-acoustic-wave(SAW) resonator in a surface-mount, ceramic M-2 case. It provides reliable, fundamental-mode, quartz frequency stabilization of fixed-frequency transmitters operating at 303.825MHz.



APPLICATIONS

- Remote Control

SPECIFICATION *

Parameters			Product	Option Code
			SR	SR
Centre Frequency(fc) :		303.825MHz	▲	303.825
Frequency Tolerance(△fc):		±75KHz	△	A
		±100KHz	△	B
		±150KHz	△	C
		±200KHz	△	D
Temp. Stability	Turnover Temp(To):	55℃Max.	▲	
	Turnover Frequency(fo):	fc 303.825 MHz	▲	
	Frequency Temp. Coefficient (FTC):	0.037ppm/℃²	▲	
Insertion Loss(IL):		1.8 dB Max.	▲	
Operating Temp. Range:		-10℃~+60℃	▲	
Storage Temp. Range:		-40℃~+85℃	▲	
Quality Factor	Unloaded Q(Q_U):	13,800	▲	
	50Ω Loaded Q(Q_L):	1,800	▲	
DC Insulation Resistance between Any Two Pins:		1.0MΩ Min.	▲	
Frequency Aging Absolute Value During the First Year(fA):		≤10ppm/year	▲	
RF Equivalent RLC Model	Motional Resistance(R_M):	23Ω Max.	▲	
	Motional Inductance(L_M):	109.010 μH	▲	
	Motional Capacitance(C_M):	2.5319 fF	▲	
	Shunt Static Capacitance (Co):	3.0 pF	▲	
CW Therefore Power Dissipation:		+10dBm	▲	
DC Voltage Between Any Two Pins:		±30V DC	▲	
Case Temperature:		-40℃~+85℃	▲	
Soldering Temperature:		+235℃	▲	
Holder Type:		6.3X4.44X2.0mm	△	M2
Package:		Tape/Reel	△	T

▲ Standard * Specifications Subject to Change Without Notice
△ Optional: please specify required code when inquiring or ordering

NOTE

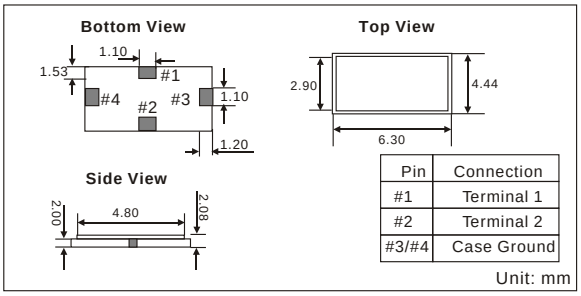
1. Electrostatic Sensitive Device. Observe precautions for handling
2. Freq. aging is the change in f_c with time and is specified at +65℃ or less. Aging may exceed the specification for prolonged temp. above +65℃. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
3. The center freq., f_c, is measured at the minimum insertion loss point, IL_{min}, with the resonator in the 50Ω test system (VSWR≤1.2:1). Tpically, $Tf_{oscillator}$ or $f_{transmitter}$ is appr. equal to the resonator f_c.
4. Typically, equipment utilizing this device requires emissions approval, which is the responsibility of the equipment manufacturer.
5. Unless noted otherwise , case temperature Tc=+25℃±2℃.
6. The design, manufacturing process, and specifications of this device are subject to change without notice.
7. Derived mathematically from one or more of the following directly measured parameters: f_c, IL, 3 dB bandwidth, f_c versus T_c , and C_o
8. Turnover temperature, T_o, is the temperature of maximum (or turnover) freq., f_o, The nominal center freq. at any case temp. , T_c, may be calculated from :f= f_o [1-FTC $(T_o-T_c)^2$]. Typically, oscillator T_o is appr. equal to the specified resonator To.

PART NUMBER GUIDE

TGS	SR	303.825	A	M2	T
Mark	SAW Resonators One-Port	Centre Freq.	Frequency Tolerance	Holder Type	Package

e.g. TGS SR 303.825 A M2 T

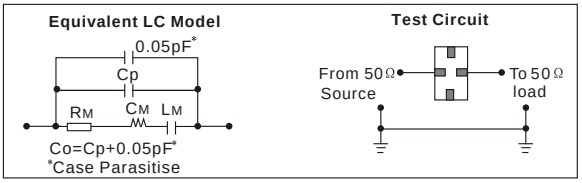
DIMENSIONS



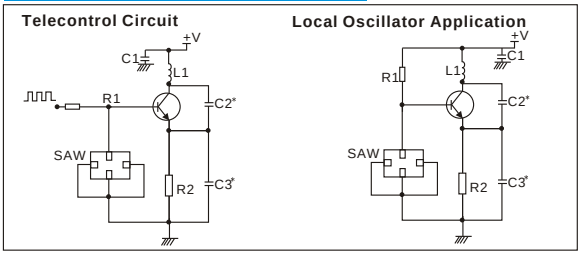
Pin	Connection
#1	Terminal 1
#2	Terminal 2
#3/#4	Case Ground

Unit: mm

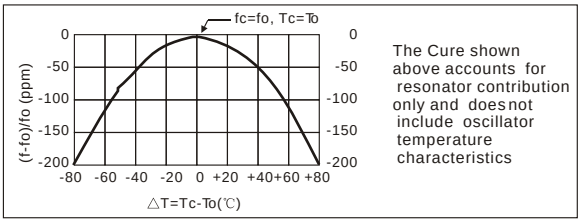
EQUIVALENT LC MODEL AND TEST CIRCUIT



TYPICAL APPLICATION CIRCUIT

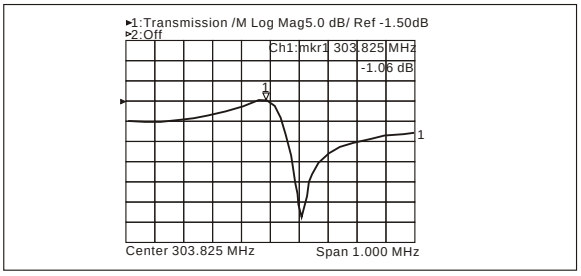


TEMPERATURE CHARACTERISTICS



The Cure shown above accounts for resonator contribution only and does not include oscillator temperature characteristics

TYPICAL FREQUENCY RESPONSE



PACKAGE

- Standard package in T/R: 3000pcs/Reel, 2Reel/box, 5box/Carton

See page 182 for detail dimensions