

FEATURES

- The SR314.5-T is a true one-port, Surface-acoustic-wave(SAW) resonator in a low-profile, TO-39 case. It provides reliable, fundamental-mode, quartz frequency stabilization for 314.5MHz LOS in 315MHz receivers

APPLICATIONS

- Remote Control

SPECIFICATION *

Parameters		Product	Option Code
		SR	SR
Centre Frequency(f_c) :	314.500MHz	▲	314.500
Frequency Tolerance(Δf_c):	± 75 KHz	△	A
	± 100 KHz	△	B
	± 150 KHz	△	C
	± 200 KHz	△	D
Temp. Stability	Turnover Temp(T_o): 55°C Max.	▲	
	Turnover Frequency(f_o): f_c 314.5 MHz	▲	
	Frequency Temp. Coefficient (FTC): 0.037 ppm/ $^\circ\text{C}^2$	▲	
Insertion Loss(IL):	2.0 dB Max.	▲	
Operating Temp. Range:	$-10^\circ\text{C} \sim +60^\circ\text{C}$	▲	
Storage Temp. Range:	$-40^\circ\text{C} \sim +85^\circ\text{C}$	▲	
Quality Factor	Unloaded Q(Q_u): 12,500	▲	
	50 Ω Loaded Q(Q_L): 2,000	▲	
DC Insulation Resistance between Any Two Pins:	1.0M Ω Min.	▲	
Frequency Aging Absolute Value During the First Year(f_A):	≤ 10 ppm/year	▲	
RF Equivalent RLC Model	Motional Resistance(R_m): 26 Ω Max.	▲	
	Motional Inductance(L_m): 120.503 μH	▲	
	Motional Capacitance(C_m): 2.1274 fF	▲	
	Shunt Static Capacitance (C_o): 2.25 pF	▲	
CW Therefore Power Dissipation:	+10dBm	▲	
DC Voltage Between Any Two Pins:	± 30 V DC	▲	
Case Temperature:	$-40^\circ\text{C} \sim +85^\circ\text{C}$	▲	
Holder Type:	TO-39	△	T
Package:	Tube	△	U

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

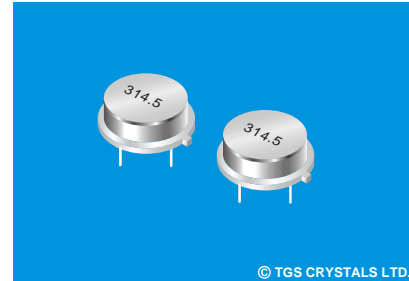
NOTE

1. Electrostatic Sensitive Device. Observe precautions for handling
2. Freq. Aging is the change in f_c with time and is specified at $+65^\circ\text{C}$ or less. Aging may exceed the specification for prolonged temp. Above $+65^\circ\text{C}$. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.
3. The centre freq, F_c , is the freq. Of minimum IL with the resonator in the specified test fixture in a 50 Ω test system with VSWR $\leq 1.2:1$. Typically, $f_{oscillator}$ or $f_{transmitter}$ is less than the resonator f_c .
4. Typically, equipment utilizing this device requires emissions testing and government approval. Which is the responsibility of the equipment manufacturer
5. Unless noted otherwise, case temperature $T_c = +25^\circ\text{C} \pm 2^\circ\text{C}$.
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: $f = f_o [1 - FTC (T_c - T_o)^2]$. Typically, oscillator T_o is appr. equal to the specified resonator T_o .

PART NUMBER GUIDE

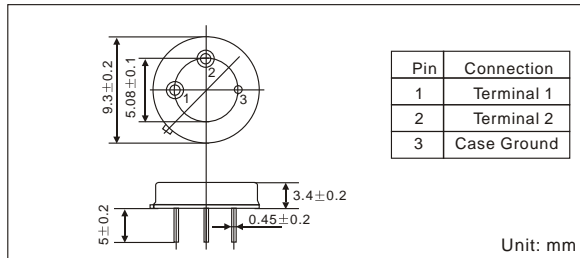
TGS	SR	314.5	A	T	U
Mark	SAW Resonators One-Port	Centre Freq.	Frequency Tolerance	Holder Type	Package

e.g. TGS SR 314.5 A T U

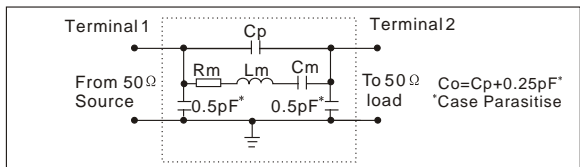


© TGS CRYSTALS LTD.

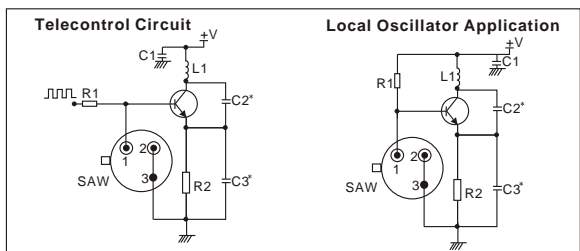
DIMENSIONS



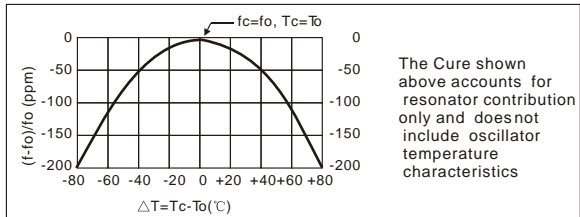
EQUIVALENT LC MODE



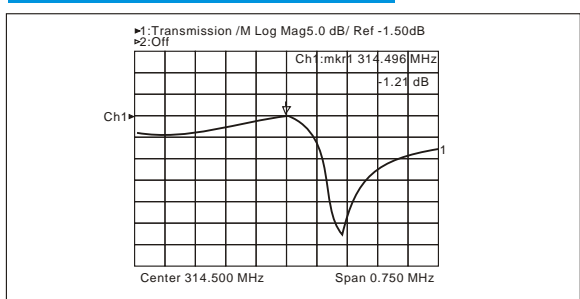
TYPICAL APPLICATION CIRCUIT



TEMPERATURE CHARACTERISTICS



TYPICAL FREQUENCY RESPONSE



PACKAGE

- Standard package in Tube: 20pcs/Tube.

