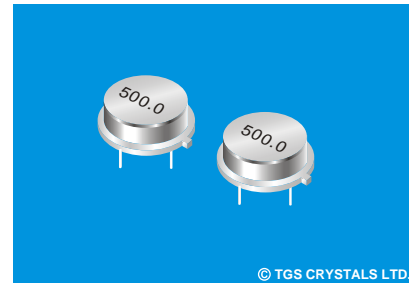


FEATURES

- The SR500-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 of fixed-frequency transmitters operating at 500.0MHz.

APPLICATIONS

- Communication



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SPECIFICATION *

Parameters		Product	Option Code
		SR	SR
Centre Frequency(f_c) :	500.000MHz	▲	500.000
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 500.0 MHz	▲	
	Frequency Temp. Coefficient (FTC): $0.037\text{ppm}/^\circ\text{C}^2$	▲	
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): 8,000	▲	
	$50\ \Omega$ Loaded Q(Q_L): 1,280	▲	
DC Insulation Resistance between Any Two Pins:	$1.0\text{M}\ \Omega$ Min.	▲	
Frequency Aging Absolute Value During the First Year(f_A):	$\leq 10\text{ppm}/\text{year}$	▲	
RF Equivalent RLC Model	Motional Resistance(R_m): $26\ \Omega$ Max.	▲	
	Motional Inductance(L_m): $48.510\ \mu\text{H}$	▲	
	Motional Capacitance(C_m): $2.0908\ \text{fF}$	▲	
	Shunt Static Capacitance (C_o): $2.25\ \text{pF}$	▲	
CW Therefore Power Dissipation:	$+10\text{dBm}$	▲	
DC Voltage Between Any Two Pins:	$\pm 30\text{V}$ 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

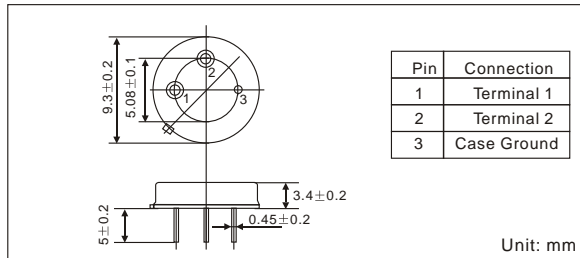
1. Electrostatic Sensitive Device. Observe precautions for handling
2. Freq. Aging is the change in f_c with time and is specified at $+65^\circ\text{C}$ or less. Aging may exceed the specification for prolonged temp. Above $+65^\circ\text{C}$. Typically, aging is greatest the first year after manufacture, 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 $50\ \Omega$ 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 20°C less than the specified resonator T_o .

PART NUMBER GUIDE

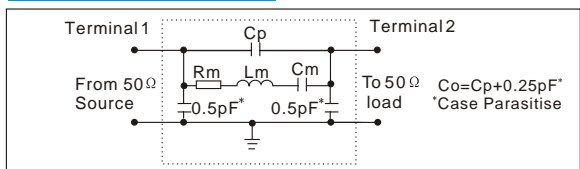
TGS	SR	500	A	T	U
Mark	SAW Resonators One-Port	Centre Freq.	Frequency Tolerance	Holder Type	Package

e.g. TGS SR 500.0 A T U

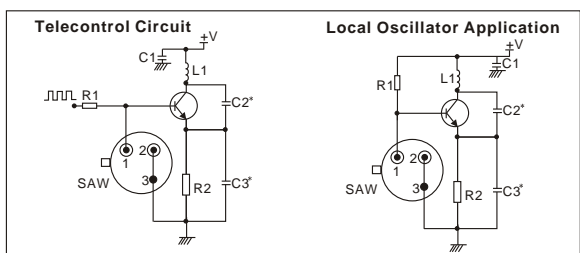
DIMENSIONS



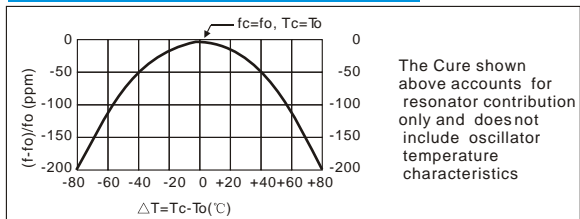
EQUIVALENT LC MODE



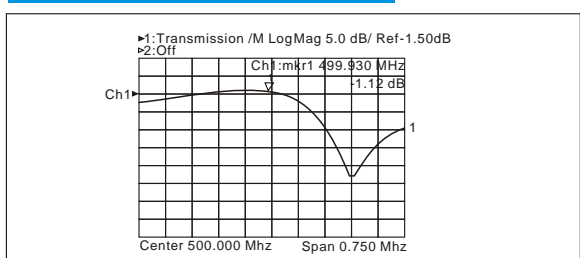
TYPICAL APPLICATION CIRCUIT



TEMPERATURE CHARACTERISTICS



TYPICAL FREQUENCY RESPONSE



PACKAGE

- Standard package in Tube: 20pcs/Tube.

