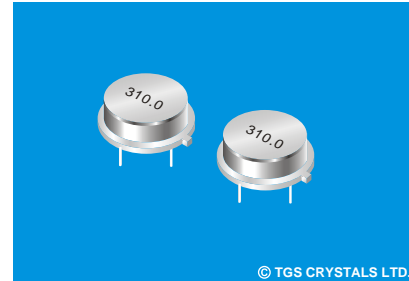


FEATURES

- The SR310-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 310.0MHz.

APPLICATIONS

- Remote Control



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SPECIFICATION \*

Parameters		Product	Option Code
		SR	SR
Centre Frequency( $f_c$ ) :	310.000MHz	▲	310.000
Frequency Tolerance( $\Delta f_c$ ):	$\pm 75$ KHz	△	A
	$\pm 100$ KHz	△	B
	$\pm 150$ KHz	△	C
	$\pm 200$ KHz	△	D
Temp. Stability	Turnover Temp( $T_o$ ): $55^\circ\text{C}$ Max.	▲	
	Turnover Frequency( $f_o$ ): $f_c$ 310.0 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 <sub>u</sub> ): 15,333	▲	
	50 $\Omega$ Loaded Q(Q <sub>L</sub> ): 2,000	▲	
DC Insulation Resistance between Any Two Pins:		1.0M $\Omega$ Min.	▲
Frequency Aging Absolute Value During the First Year(fA):		$\leq 10$ ppm/year	▲
RF Equivalent RLC Model	Motional Resistance(R <sub>m</sub> ): 24 $\Omega$ Max.	▲	
	Motional Inductance(L <sub>m</sub> ): 118.143 $\mu$ H	▲	
	Motional Capacitance(C <sub>m</sub> ): 2.2333 fF	▲	
	Shunt Static Capacitance (C <sub>o</sub> ): 2.1 pF	▲	
CW Therefore Power Dissipation:		+10dBm	▲
DC Voltage Between Any Two Pins:		$\pm 30$ 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

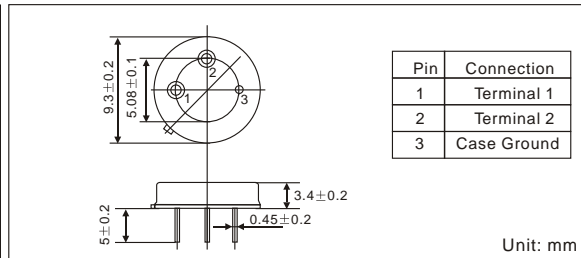
- 1: Electrostatic Sensitive Device. Observe precautions for handling
- 2: Freq. Aging is the change in  $f_c$  with time and is specified at  $+65^\circ\text{C}$  or less. Aging may exceed the specification for prolonged temp. Above  $+65^\circ\text{C}$ . Typically, aging is greatest the first year 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  $\Omega$  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.,  $f_c$ , may be calculated from:  $f_c = f_o [1 - FTC (T_c - T_o)^2]$ . Typically, oscillator  $T_o$  is appr. equal to the specified resonator  $T_o$ .

PART NUMBER GUIDE

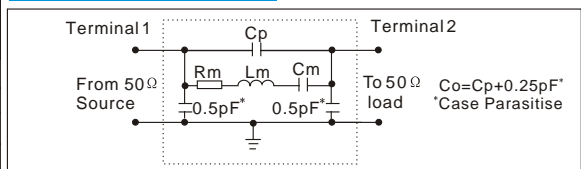
TGS	SR	310	A	T	U
Mark	SAW Resonators One-Port	Centre Freq.	Frequency Tolerance	Holder Type	Package

e.g. TGS SR 310.0 A T U

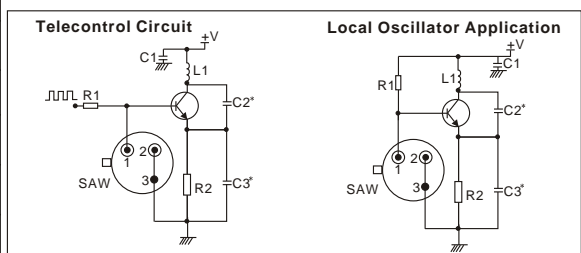
DIMENSIONS



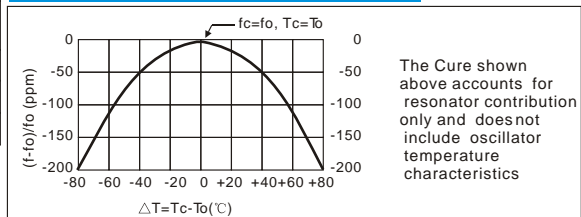
EQUIVALENT LC MODE



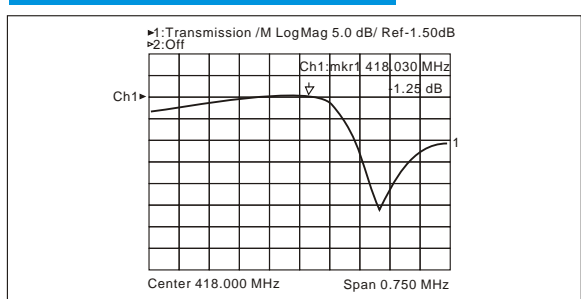
TYPICAL APPLICATION CIRCUIT



TEMPERATURE CHARACTERISTICS



TYPICAL FREQUENCY RESPONSE



PACKAGE

- Standard package in Tube: 20pcs/Tube.

