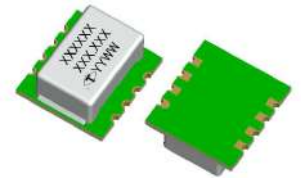


High Frequency High Stability / Very Low Noise TCXO TU-Type series

TU-Type Series in 13 x 14mm SMD package

TU-Type series is a high frequency performance TCXO offering high frequency and high stability / very low phase noise. The part comes in a small SMD package which makes it suitable for reflow soldering during pick and place assembly.



FEATURES

- **Low Phase Noise**
- **High Stability for Stratum 3**
- Small SMD Package

APPLICATIONS

RoHS Compliant Standard

- Time Synchronization
- Microwave Communication
- Test & Measurement
- Telecom Systems
- Satellite Communication

ELECTRICAL SPECIFICATIONS

1. OUTPUT (PIN = "R.F. OUTPUT")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
1.1.	Frequency (Fo)		38.4		MHz	
1.2.	Initial Tolerance		+/-100		ppb	Vc input floating
1.3.	Frequency Stability vs. Temperature	-0.28		+0.28	ppm	
1.4.	Frequency Stability vs. Supply Voltage	-0.1		+0.1	ppm/V	
1.5.	Frequency Stability vs. Aging	-1.0		+1.0	ppm	Per year – First Year
		-3.0		+3.0		10 Years
1.6.	Operating Temperature Range	-40°C ~ +85°C			°C	
1.7.	Storage Temperature Range	-40°C ~ +105°C			°C	
1.8.	Waveform	LVCMOS				Sine Wave is available.
1.9.	Output Level	Output High	2.97		V	
		Output Low		0.33		
		Duty Cycle	45		55	%
1.10.	Rise/Fall Time			3	nSec.	
1.11.	Load		15		pF	
1.11.1.	Phase Noise (Max.)			-87	dBc/Hz	@ 10Hz
1.11.2.				-117	dBc/Hz	@ 100Hz
1.11.3.				-141	dBc/Hz	@ 1KHz
1.11.4.				-150	dBc/Hz	@ 10KHz
1.11.5.				-162	dBc/Hz	@ 100KHz
1.11.6.				-164	dBc/Hz	@ 1MHz

2. INPUT POWER (PIN = “+VDC”)

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
2.1.	Voltage	2.97	+3.3	3.63	V	
2.2.	Current			35	mA	At maximum supply voltage

3. Voltage Control (PIN = “Vc”)

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
3.1.	Control Voltage	0		3.3	V	Positive Slope
3.2.	APR	+/-5			ppm	
3.3.	Input Impedance	10K			ohm	
3.4.	Linearity			10	%	
3.5.	Modulation BW		6		Hz	3dB Bandwidth

4. ENVIRONMENTAL

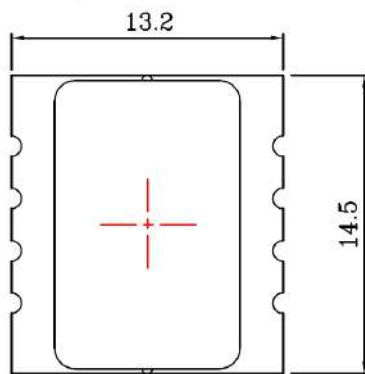
	Parameter	Reference Std.	Test Condition
4.1.	Vibration Test	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1	10~2000Hz, 1.52mm, 20G, each axis for 4 hrs
4.2.	Thermal Shock	MIL-STD-883 1010 Condition B JESD22-A104 Condition B	-55 °C , 125 °C ; soak time is 10 mins, with total 200 cycles
4.3.	Mechanical Shock	MIL-STD-883 2002 Condition B JESD22-B104 Condition B	1500G, half-sine, 0.5ms, each axis for 3 times.

ORDERING INFORMATION

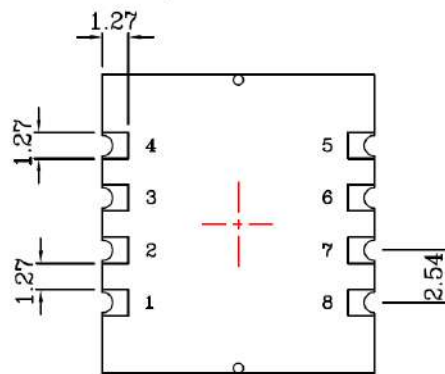
TUECKLJTDF-Frequency

OUTLINE DRAWING

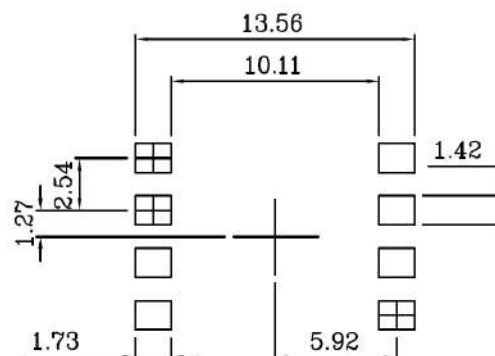
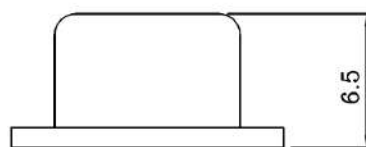
[TOP VIEW]



[BOTTOM VIEW]



[SIDE VIEW]



Recommended Land Pattern
Top View

Pin FUNCTIONS

Pin	Function
#1	Vcon(Vc)
#2	GND
#3	GND
#4	GND
#5	GND
#6	Output
#7	GND
#8	VDD

PRODUCT IDENTIFICATION (MARKING)

