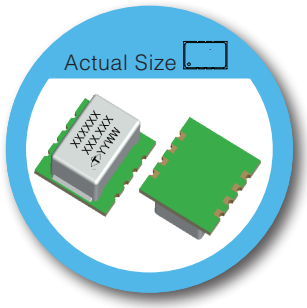
TU Type High Frequency, High Stability, Ultra Low Noise

13 x 14 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator



RoHS Compliant

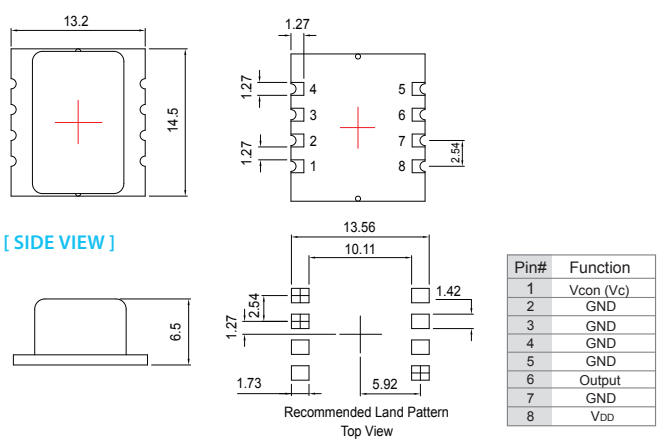
FEATURE

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

TYPICAL APPLICATION

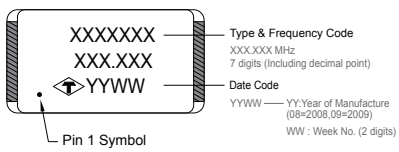
- Time Synchronization
- Microwave Communication
- Test & Measurement
- Telecom Systems
- Satellite Communication

DIMENSION (mm)



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

IDENTIFICATION PRODUCT MARKING



ELECTRICAL SPECIFICATION
OUTPUT (PIN = "R.F. OUTPUT")

Parameter		Min.	Typ.	Max.	Unit	Test Condition
Frequency (Fo)			38.4, 50		MHz	
Initial Tolerance			±1		ppm	Vc input floating
Frequency Stability vs. Temperature		-0.28		+0.28	ppm	
Frequency Stability vs. Supply Voltage		-0.1		+0.1	ppm/V	
Frequency Stability vs. Aging		-1.0		+1.0	ppm	Per year – First Year
		-3.0		+3.0		10 years
Operating Temperature Range		-40°C ~ +85°C			°C	
Storage Temperature Range		-40°C ~ +105°C			°C	
Waveform		CMOS				Sine Wave is available.
Output Level	Output High	2.97			V	
	Output Low			0.33		
	Duty Cycle	45		55	%	
Rise/Fall Time				4	nSec.	
Load			15		pF	
Phase Noise (Max.)				-87	dBc/Hz	@10Hz
				-117	dBc/Hz	@100Hz
				-141	dBc/Hz	@1KHz
				-150	dBc/Hz	@10KHz
				-155	dBc/Hz	@100KHz
				-157	dBc/Hz	@1MHz

Note: not all combination of options are available. Other specifications may be available upon request.

INPUT POWER (PIN = VDD)

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

VOLTAGE CONTROL (PIN = "Vc")

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Control Voltage	0		3.3	V	Positive Slope
APR	+/-5			ppm	
Input Impedance	100K			ohm	
Linearity			10	%	
Modulation BW		6		Hz	3dB Bandwidth

ENVIRONMENTAL

Parameter	Reference Std.	Test Condition
Vibration Test	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1	10~2000Hz, 1.52mm, 20G, each axis for 4 hrs
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
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

Note: not all combination of options are available. Other specifications may be available upon request.