Features

Standard Frequency 10MHz
Surface mount or leaded package
Best in class Frequency Stability over
temperature +/- 50 ppb
Rugged package design for shock and
vibration
5 dBm sine wave output
5V supply; 15 mA max. current

Typical Applications

Cellular base stations   Satellite Communications
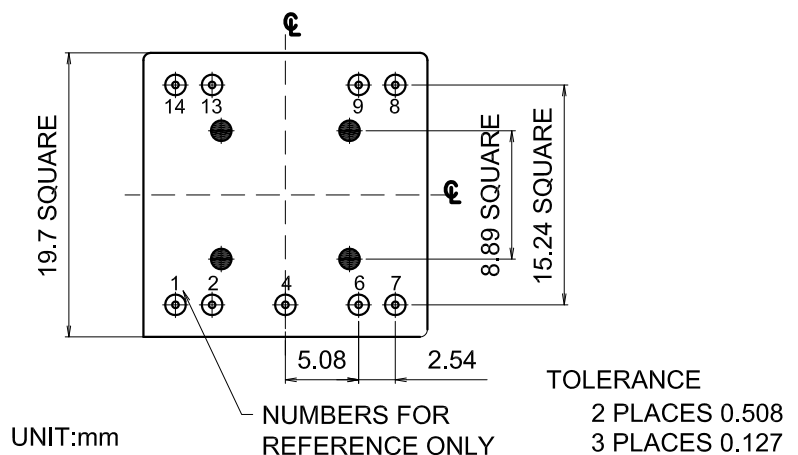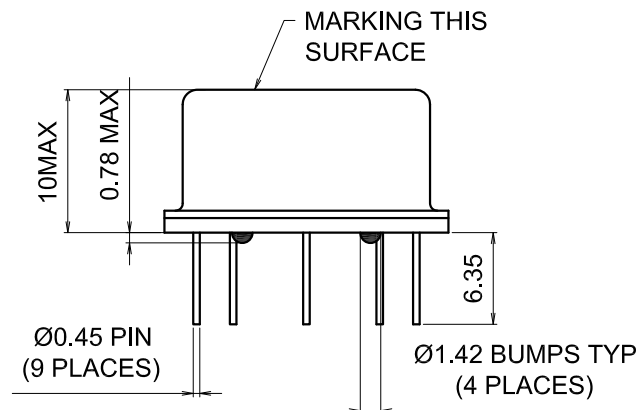Land mobile radio   Test and Measurement
GPS Timing / Synchronization

Description

The VCTCXOGR22-50ppb-10MHz represents a new generation of proprietary temperature compensation
technology developed to further bridge the stability GAP between OCXO's and TCXO's.
Using the latest advances in precision crystal manufacturing and software compensation algorithms,
The new device is able to achieve OCXO-type stability of 50 ppb over -40C to 85C.

Mechanical Drawing and PIN Connections

Pin Connections
1   -0V,Gnd
2   -N/C
4   -Vref
6   -N/C
7   -EFC
8   -Supply V
9   -N/C
13 -N/C
14 -Output

MARKING THIS SURFACE

10MAX   0.78 MAX   6.35

Ø0.45 PIN
(9 PLACES)

Ø1.42 BUMPS TYP
(4 PLACES)

19.7 SQUARE

8.89 SQUARE   15.24 SQUARE

5.08   2.54

NUMBERS FOR
REFERENCE ONLY

TOLERANCE
2 PLACES 0.508
3 PLACES 0.127

UNIT:mm

VCTCXOGR22-50ppb-10MHz
20mm x 20mm x 10.7mm
50 ppb precision comp

Specification

VCTCXO Specification	Sym.	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Operational Frequency	f_0			10.000000		MHz	
Sine Wave Output — Load				50		ohms	
Sine Wave Output — RF_output			3	5	7	dBm	
Sine Wave Output — Harmonics					-20	dBc	
Power supply							
Voltage	V_{CC}		4.75	5.0	5.25	V	
Current consumption	Icc				15	mA	
Frequency control*							
Control voltage range	V_c		0		4.5	V	Positive tuning slope
Tuning range				+/- 5.0		ppm	
Frequency stability							
vs. temperature		-40℃ to +85℃, ref 25℃	-50		+50	ppb	Based on formula :
vs. 5% change in supply voltage		ref Vcc typ.	-100		+100	ppb	Delta_F =
							(Fmax – Fmin) / (Fmax + Fmin)
SSB Phase noise For 10 MHz sine wave Typical		10 Hz		-95		dBc/Hz	
		100 Hz		-125			
		1 kHz		-150			
		10 kHz		-155			
		100 kHz		-158			
Aging — Per Year		Projected aging after 30 days operation			+/-0.3	ppm	
Environmental conditions.							
Operating temperature range		**-40℃ to +85℃ maximum range available that is standard**					
Storage temperature range		**-55℃ to +105℃**					