



Features and Benefits

High frequency stability (less than ± 5 ppb over -40°C to $+85^{\circ}\text{C}$)
 Low aging (less than ± 2 ppb per day)
 Small Size Packaging

Typical Applications

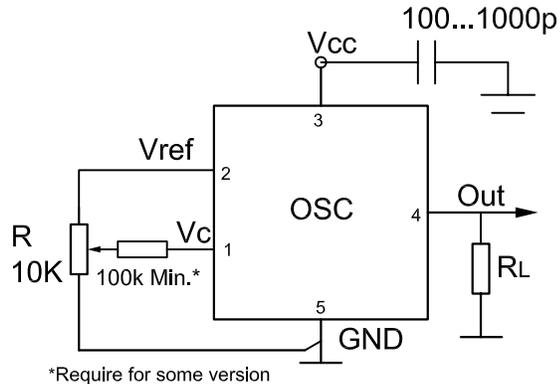
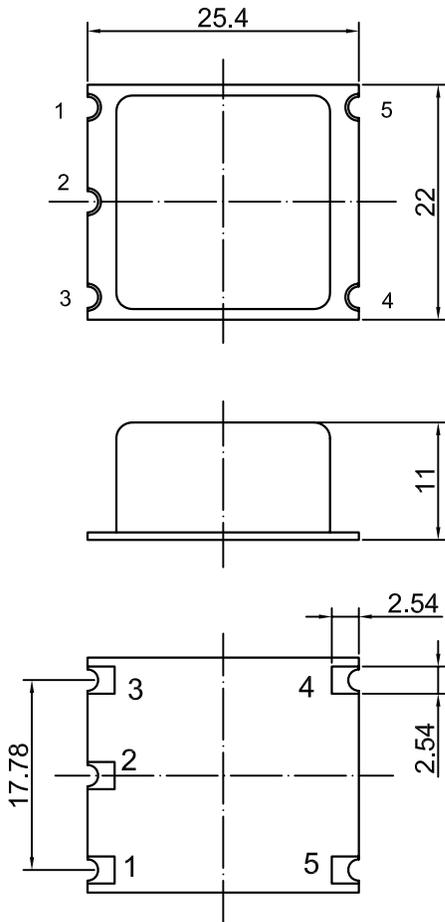
SATCOM System
 Cellular Base Stations
 Radar Applications
 Stratum 3E clock system

Description

OCXO2522C-65621-100MHz series offers high frequency stability, low long term aging and low phase noise, all in a compact package to suit the different communication needs.

Mechanical Drawing & Pin Connections

Drawing No: MD140083-1



Pin	Signal
1	Electrical tuning
2	Reference voltage
3	+V Supply
4	RF OUT
5	GND

Unit in mm
 1mm = 0.0394 inches

Note : 12.7mm height is available



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F _{nom}			100		MHz	
RF Output							
Signal Waveform			HCMOS				
Load	R _L		10kohm//5pf				
H-Level Voltage	V _H		2.4			V	
L- Level Voltage	V _L				0.4	V	
Duty Cycle			45		55	%	
Rise/Fall time					3	ns	
Power Supply							
Reference Voltage VREF Output			2.5		3.1	V	
Supply Voltage	V _S		3.15	3.3	3.45	V	
Warm-up Time	T _{up}	At +25°C to Δf/f=1e-7			180	s	ref to freq after 15 min of operation
Power Consumption		Steady state, +25°C			1200	mW	
		Warm-up			3500	mW	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Compliance with 10 years aging	±0.3			ppm	
EFC voltage	V _c		0		3.1	V	
EFC Slope			positive				
Frequency Stability							
Versus Operating Temperature Range		At +25°C, air flow 0.5m/s max			±5	ppb	
Initial Tolerance @+25°C		V _c @ VREF / 2	±0.01	±0.1		ppm	
Versus supply voltage	V _S	Ref Vcc typ		±0.2		ppb	
G-Sensitivity		Worst direction,0-1kHz vibration BW	±0.3	±1.0		ppb/G	
Retrace		24h work after 24h off			±10	ppb	
Aging Per Day		After 30 days of operation			±2	ppb	
Aging 1 st Year						±200	ppb
Allan Variance		1s	0.5		15	e-12	
SSB Phase noise		10Hz			-87	dBc	
		100Hz			-117	dBc	
		1kHz			-137	dBc	
		10kHz			-157	dBc	
		100kHz			-160	dBc	
Environmental, Mechanical Conditions							
Air flow velocity		0.5m/s max					
Operating temperature range		-40°C to 85°C					
Storage temperature range		-60°C to 85°C					
Power voltage		-0.5V to Vcc+20%					
Control voltage		-0.5V to 6V					
Humidity		Hermetically sealed					
Mechanical shock		Per MIL-STD-202,30G half sine pulse,11mS					
Vibration		Per MIL-STD-202, 10G swept sine 0 to 500Hz					
Soldering conditions		Hand solder only, not reflow compatible. 260°C 10s (on pins)					
Washing conditions		Washing with water or alcohol based detergent allowed only with final enough drying stage					