Features and Benefits

Temp. stability less than +/- 10 ppb
-10C to +70C operation
CMOS output
3.3V

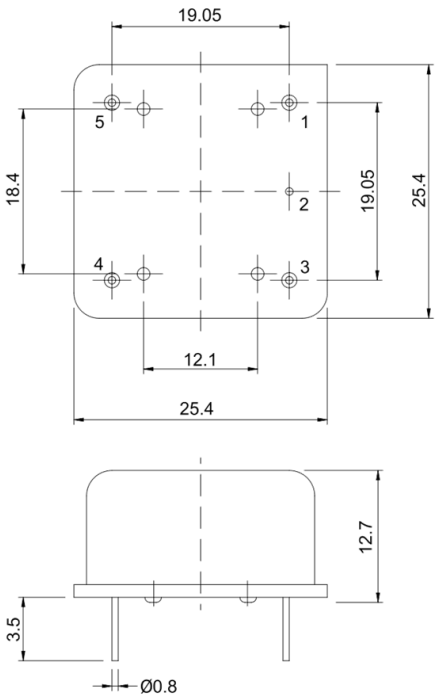
Typical Applications

GPS or Beidou Navigation Systems
Test Equipment, and synthesizers
Communications Systems

Description

The OCXO2525N ovenized oscillator family is an industry standard configuration offering a small OCXO footprint for high performance applications requiring OCXO type stability and phase noise, but in a smaller profile enclosure.

Mechanical Drawing & Pin Connections



PIN NO.	CONNECTION
1	RF OUTPUT
2	GROUND
3	CONTROL VOLTAGE
4	NOT CONNECTED
5	SUPPLY VOLTAGE

Specification

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		F_{nom}			17.000000		MHz	
LVCMOS	Logic Level 1			+2.4			V	
	Logic Level 0					+0.4	V	
	Rise / Fall Time					10	ns	
	Duty Cycle			45	50	55	%	
Power Supply								
Voltage		V_{cc}		3.15	3.30	3.45	V	
Current Consumption			Warm-up			4.0	Watts	
			Steady-state, +25℃			2.2	Watts	
Warm-up Time:		T_{up}	To within +/- 50 ppb, at +25°C			300	sec	ref. frequency after 30 min.
Frequency Control*								
Control voltage range (Pin 3)				0.00	1.65	3.30	V	
Tuning range				+/- 1.0			ppm	
Slope (Linearity)			Positive			+/- 10	%	
Input Impedance when pin 3 OPEN				100K			ohm	
Frequency Stability								
Versus temperature			-10°C to +70°C, ref 25°C	-10.0		+10.0	ppb	
Tolerance at 25°C			After turn on +5 minutes	-100		+100	ppb	Ref. freq. after 30 min. ON
Versus 5% change in supply voltage				-5.0		+5.0	ppb	
Daily Aging			Per Day maximum after 30 days on	-1.0		+1.0	ppb	
First Year Aging				-0.100		+0.100	ppm	
SSB Phase noise (typ.) @ 17 MHz CMOS output and Vcc = 3.3V							dBc/Hz	
			100 Hz			-130.0		
			1000 Hz			-145.0		
			10 KHz			-150.0		
			100 KHz			-150.0		
Short-Term	Tau = 1 second					1.0	E-11	
	100 samples							
Environmental Conditions								
Operating temperature range		-10°C to +70℃						
Storage temperature range		-55°C to +105℃						