



Features and Benefits

Frequency range: 8-60MHz
Supply voltage: 3.0/3.3V
Current Consumption: 7mA Max
Output waveform: Clipped Sine or CMOS/TTL
Frequency stability vs. operating temperature: ±0.28ppm
Aging per year: ±1.0ppm Max
Phase noise@1KHz: -138dBc/Hz
Operating temperature: -40°C to +85°C
Size:5.0x3.2x1.6mm

Typical Applications

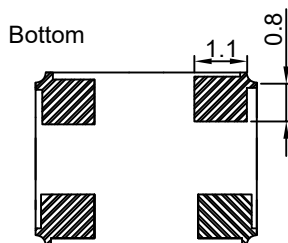
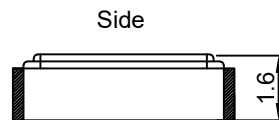
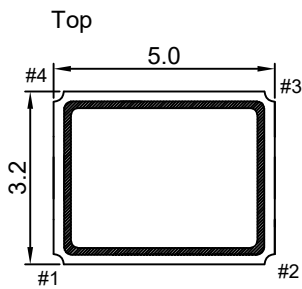
Cellular Base Stations
Instrumentation
Microwave Applications
Radar reference

Description

The TCXO5300AX is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: MD2400' (-1



Pin Connections

Pin	Function
1	Control Voltage/N.C.
2	GND
3	RF Output
4	Supply Voltage

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F_{nom}		8		60	MHz	
RF Output							
Signal Waveform			CMOS/TTL				
Load	R_L			15		pF	
H-Level Voltage	V_H		90%Vcc			V	
L- Level Voltage	V_L				10%Vcc	V	
Duty Cycle			45	50	55	%	
Rise/Fall time				10		ns	
Clipped Sinewave							
Signal Waveform			Clipped Sinewave				
Level			0.8			Vpp	
Load		$\pm 10\%$	10Kohm//10pF				
Power Supply							
Supply Voltage	V_{cc}			3.0, 3.3		V	
Start up Time	T_{up}			5		ms	
Current Consumption				4.0	7.0	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)			± 5 or ± 10			ppm	
EFC voltage	V_c		0	$V_{cc}/2$	V_{cc}	V	
Input Impedance				100		k Ω	
Linearity				10		%	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range				± 0.28 , ± 0.5 , ± 1 , ± 2 or ± 3		ppm	
Initial Tolerance		$+25^\circ C$			± 2	ppm	
Aging 1 st Year					± 1.0	ppm	
Aging 5 years					± 3.0	ppm	
SSB Phase noise (10MHz)		10Hz		-85		dBc/Hz	
		100Hz		-120		dBc/Hz	
		1kHz		-138		dBc/Hz	
		10kHz		-142		dBc/Hz	
		100kHz		-147		dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	-20°C to +70°C, -40°C to +85°C						
Moisture Sensitivity Level	1						