



### 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:  $\pm 0.28$ ppm  
Aging per year:  $\pm 1.0$ ppm Max  
Phase noise@1KHz: -138dBc/Hz  
Operating temperature: -40°C to +85°C  
Size:5.0x3.2x1.6mm

### Typical Applications

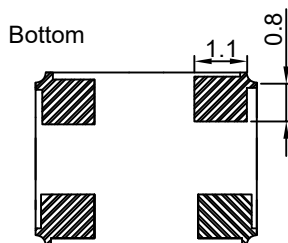
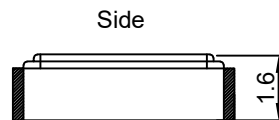
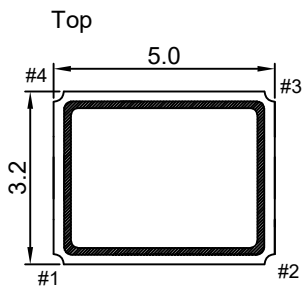
Cellular Base Stations  
Instrumentation  
Microwave Applications  
Radar reference

### 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	
<b>RF Output</b>							
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	
<b>Clipped Sinewave</b>							
Signal Waveform			Clipped Sinewave				
Level			0.8			Vpp	
Load		$\pm 10\%$	10Kohm//10pF				
<b>Power Supply</b>							
Supply Voltage	$V_{cc}$			3.0, 3.3		V	
Start up Time	$T_{up}$			5		ms	
Current Consumption				4.0	7.0	mA	
<b>Frequency Adjustment Range</b>							
Electronic Frequency Control (EFC)			$\pm 5$ or $\pm 10$			ppm	
EFC voltage	$V_c$		0	$V_{cc}/2$	$V_{cc}$	V	
Input Impedance				100		k $\Omega$	
Linearity				10		%	
EFC Slope				positive			
<b>Frequency Stability</b>							
Versus Operating Temperature Range				$\pm 0.28$ , $\pm 0.5$ , $\pm 1$ , $\pm 2$ or $\pm 3$		ppm	
Initial Tolerance		$+25^\circ C$			$\pm 2$	ppm	
Aging 1 <sup>st</sup> Year					$\pm 1.0$	ppm	
Aging 5 years					$\pm 3.0$	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	
<b>Environmental, Mechanical Conditions</b>							
Operating temperature range		-20°C to +70°C, -40°C to +85°C					
Moisture Sensitivity Level		1					