



### Features and Benefits

Frequency range: 10-120MHz  
Supply voltage: 3.3/5.0V  
Steady state: 1.5W Typ  
Output waveform: Sinewave or CMOS/TTL  
Frequency stability vs. operating temperature:  $\pm 20.0$ ppb  
Aging:  $\pm 100$ ppb per year  
Phase noise@1KHz: -145dBc/Hz  
Operating temperature: -40°C to +85°C  
Size:28.7x26.2x12.7mm

### Typical Applications

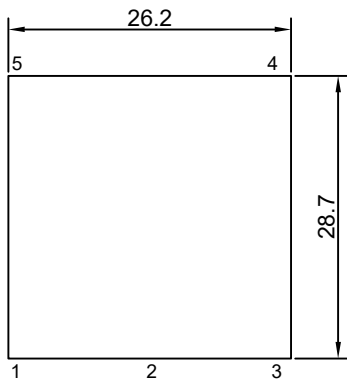
Cellular Base Stations  
Instrumentation  
Microwave Applications  
Radar reference

### Description

The OCXO2525AX 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

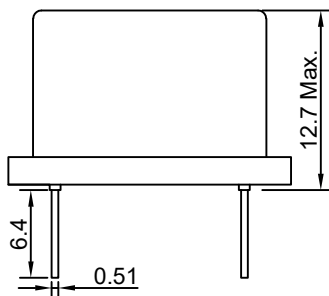
**Drawing No: MD240010-1**



Pin Connections

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

Unit in mm  
1mm = 0.0394 inches





**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Frequency Range	F <sub>nom</sub>		10		120	MHz		
<b>RF Output</b>								
Signal Waveform			CMOS/TTL					
Load	R <sub>L</sub>			15		pF		
H-Level Voltage	V <sub>H</sub>	90%V <sub>cc</sub>				V		
L- Level Voltage	V <sub>L</sub>				10%V <sub>cc</sub>	V		
Duty Cycle			45	50	55	%		
Rise/Fall time					5	ns		
Signal Waveform			Sinewave					
Level				+9		dBm		
Load			45	50	55	ohm		
Harmonics					-40	dBc		
Spurious					-70	dBc		
<b>Power Supply</b>								
Supply Voltage	V <sub>cc</sub>			3.3/5.0		V		
Warm-up Time	T <sub>up</sub>	To initial tolerance			3	min		
Power Consumption		Steady state, +25°C		1.5		W		
		Warm-up			3.5	W		
<b>Frequency Adjustment Range</b>								
Electronic Frequency Control (EFC)			±0.5 or ±1.0			ppm		
EFC voltage	V <sub>c</sub>		0	V <sub>cc</sub> /2	V <sub>cc</sub>	V		
Input Impedance				100		k Ω		
Linearity				10		%		
EFC Slope				positive				
<b>Frequency Stability</b>								
Versus Operating Temperature Range		Max-Min/2		±20, ±50 or ±100		ppb		
Initial Tolerance		+25°C±1 °C			±100	ppb		
Versus supply voltage		±5% change		±2		ppb		
Versus load		±5% change		±2		ppb		
Aging Per Day		after 30 days of operation			±1.0	ppb		
Aging 1 <sup>st</sup> Year						±100	ppb	
Allan Variance		1s		5		e-11		
SSB Phase noise (10MHz) (Typical value)				Sine	CMOS		@+25°C	
				10Hz	-120	-120		dBc/Hz
				100Hz	-140	-140		dBc/Hz
				1kHz	-145	-145		dBc/Hz
				10kHz	-155	-150		dBc/Hz
100kHz	-155	-155	dBc/Hz					
<b>Environmental, Mechanical Conditions</b>								
Operating temperature range	0°C to +70°C, -20°C to +70°C, -40°C to +85°C							
Storage temperature range	-55°C to +100°C							
Mechanical shock	MIL-STD-202 Method 213 Test Condition C							
Seal	MIL-STD-202 Method 112 Test Condition D							
Vibration	MIL-STD-202 Method 201							
Acceleration Sensitivity	10MHz output, Vibration profile: 0.001G <sup>2</sup> /Hz 10Hz to 2kHz. Value is 1.0 ppb/g							