



Features and Benefits

- Less than +/- 0.5 ppb per day aging
- Less than +/- 50 ppb per year aging
- Industry Standard Package
- Less than 0.05ppb/s Root-Allan variance

Typical Applications

- Cellular Base Stations
- Instrumentation
- Microwave Application

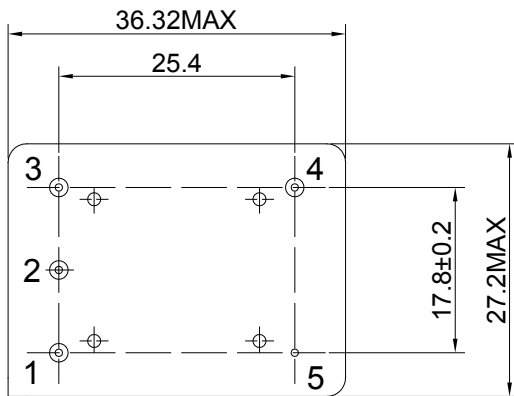
Description

OEXO3627S series oscillators is designed for applications where space is at a premium and good frequency stability is required. The oscillators can be used in many communications applications. A choice of quartz resonators offers a variety of performance versus cost options to fit most applications.

Mechanical Drawing & Pin Connections

Drawing No: MD150083-2

Bottom View

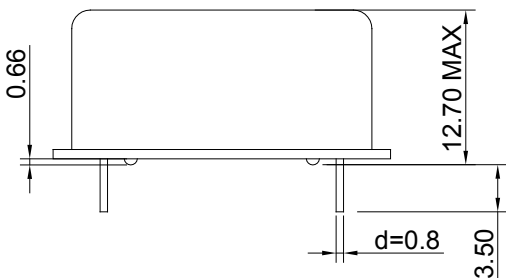


Pin Connections:

Pin	Symbol	Function
1	Vc	Control Voltage(EFC)
2	VREF	Reference Voltage
3	Vs	Supply Voltage
4	RF OUT	RF Output
5	GND	Ground

Unit : mm
1mm=0.039 inch

Side View





Specifications

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F ₀			10.000000		MHz	
RF Output							
Output Waveform			Rectangular				
Level				LVTTL			
Output Level"1"			+2.6			V	
Output Level"0"					+0.4	V	
Load			13.5	15	16.5	pF	
Duty Cycle		@+1.65V	45	50	55	%	
Rise/Fall Time		10% to 90%			6	ns	
Spurious					-60	dBc	
Power Supply							
Voltage	Vcc		11.4	12.0	12.6	V	
Current		Warm-up			400	mA	
		Steady State			1.3	W	@+25°C
Reference Voltage							
Reference Voltage		Over temperature range in 2.1V	4.75	5	5.25	V	
Load			9			Kohm	
Frequency Control*							
Tuning Range		VCO @0			-0.5	ppm	Ref. to frequency at nominal center voltage See Note1
		VCO @5V	+0.5			ppm	
Control Voltage	Vc		0	2.5	5.0	V	
Slope				Positive			
Linearity					+/-10	%	
Input Impedance			100			Kohm	
Frequency Stability							
Initial Tolerance @+25°C(+/-1°C)		1. After turn on power 15+/-1 minutes 2. <=90 days following date code 3. VCO input at 2.5+/-0.001V.			+/-0.1	ppm	
Vs. Operating Temperature Range		-30°C to +70°C -40°C to +85°C Refer to +25°C		+/-3 +/-5 +/-10		ppb	Refer to Table 1
Vs. Supply Voltage Change		+/-5% change			+/-0.5	ppb	
Vs. Load Change		+/-5% change			+/-0.5	ppb	
Warm-up		In 10 minutes @+25+/-1°C			+/-10	ppb	Ref. to 1hour
Short Term		Root allan variance			0.05	ppb/s	
Aging	Per Day	After 30 Days			+/-0.5	ppb	
	Per Year				+/-50	ppb	
	10 Years				+/-0.3	ppm	
Phase Noise							
Phase Noise		@1Hz		-95	-90	dBc/Hz	
		@10Hz		-125	-120	dBc/Hz	
		@100Hz		-140	-135	dBc/Hz	
		@1KHz		-148	-145	dBc/Hz	
		@10KHz		-156	-155	dBc/Hz	
		@100KHz		-158	-155	dBc/Hz	
Environmental							
Operating Temperature Range	-40°C to +85°C (See Note2)						
Storage Temperature	-55°C to +105°C						
Humidity	MIL-STD-202, Method 103 Test Condition A 95% RH @ +40°C, non-condensing, 240 hours						
Vibration (non-operating)	MIL-STD-202, Method 201 0.06" Total p-p, 10 to 55Hz						
Shock (non-operating)	MIL-STD-202, Method 213 Test Condition J 30g, 11ms, half -sine						

Note 1. When not connected, VCO INPUT is internally held at 2.5V.

Note 2. Output maintained over this temperature range. Other requirements of this specification may not be met when operating outside the temperature range in 2.1.



Table 1:

Temperature Range vs. Stability Availability					
Temperature range (°C)	±3ppb	±5ppb	±10ppb	Control Voltage	Reference Voltage
-30 to +70	Available	Available	Available	2.5V	N/A
-40 to +85	Available	Available	Available	2.5V	N/A