

Features and Benefits

+/- 10 ppb stability (-40°C to +85°C)
 5V supply 6 dBm sine wave output
 20.2 x 20.2 x 12.5 mm package
 Very low phase noise:
 Better than -130 dBc/Hz at 10 Hz
 Better than -150dBc/Hz at 100 Hz
 Better than -162 dBc/Hz at 1 KHz
 Better than -165 dBc/Hz at 10 KHz
 Better than -167 dBc/Hz at 100 KHz

Description

The OCXO3315 ovenized oscillator is a low profile, compact design which is suitable for a wide range of applications where low long term aging, very good temperature stability, and very low phase noise are required in smaller and smaller next generation equipment. .

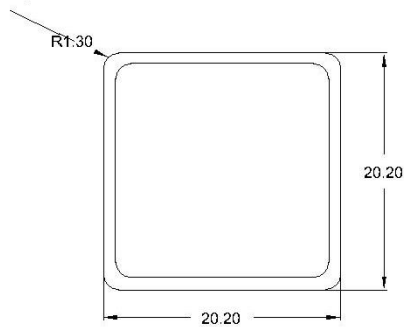
Typical Applications

Cellular Base Stations
 VSAT , INMARSAT, GPS Receivers
 Stratum 3E Clocking Systems
 Test Instrumentation

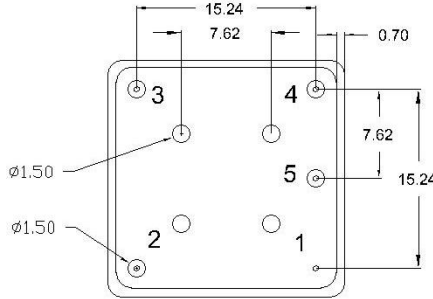
Mechanical Drawing & Pin Connections

Drawing No: MD12032

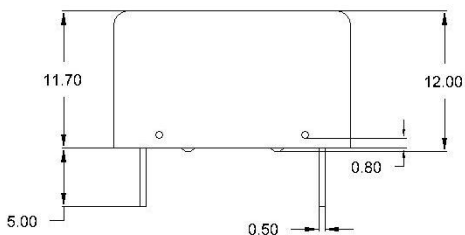
Top view



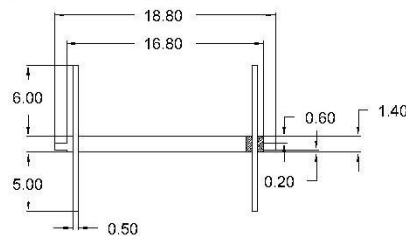
Bttom view



Side view



holder side view



PIN	CONNECTION
#1	GND
#2	OUTPUT
#3	VCC
#4	Vctrl
#5	VRef.

Unit : mm

Specifications

OCXO Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Frequency Range	F ₀			10		MHz		
RF Output								
HCMOS(TTL) Option	Load	R _L		10		Kohm		
	H-Level Voltage	V _H	V _{CC} =5V or 12V	3.8		15	pF	
			V _{CC} =3.3V	2.4			V	
	L-Level Voltage	V _L				0.4	V	
	Duty Cycle			45		55	%	
Rise/Fall Time					10	ns		
Sine-Wave Option	Level	L		+6	+8	+10	dBm	
	Load	R _L			50		Ohm	
	Harmonics Level					-30	dBc	
Spurious Level						-100	dBc	
Power Supply								
Voltage	V _{CC}		4.75	5.0	5.25	V		
Current Consumption(Steady state)		@ +25°C		1	1.2	W		
Current Consumption(Warm-up)		@ +25°C		3.2	3.5	W		
Warm-up time@+25°C		To Δf/f=1e-7			180	S	Ref. to frequency after 30min.	
Frequency Control*								
EFC Voltage	V _C	V _{CC} =5V or 12V	0		4.2	V	Positive	
		V _{CC} =3.3V	0		2.8	V		
Electronic Frequency Control(EFC)			+/-0.5	+/-1		ppm		
Reference Voltage	V _{ref}	V _{CC} =5V or 12V	4.1	4.2	4.3	V		
		V _{CC} =3.3V	2.7	2.8	2.9	V		
Frequency Stability								
Vs. Operating Temperature Range		-40°C to +85°C, ref+25°C		+/-10		ppb		
Vs. Supply Voltage		Ref V _{CC} typ.		+/-1		ppb		
Vs. Acceleration		Worst direction	+/-0.5		+/-1	ppb/G		
Allan Variance		1s	5	10		e-12		
Aging	Per day	After 30days operation	0.2	0.5		ppb		
	First year		20	50		ppb		
	20years		0.3	0.5		ppm		
Phase Noise								
Phase Noise			1Hz	-110	-100		dBc/Hz	
			10Hz	-135	-125			
			100Hz	-155	-145			
			1KHz	-163	-155			
			10KHz	-173	-168			
			100KHz	-175	-173			
Environmental								
Operating temperature range	-40°C to +85°C maximum range available that is standard							
Storage temperature range	-60°C to +90°C							
Humidity	Hermetically sealed							
Mechanical shock	Per MIL-STD 202 30G half sine pulse, 11 ms							
Vibration	Per MIL-STD 202 10G swept sine 10 to 500 Hz (pins 0.5mm), 10G swept sine0-2000Hz(pins 0.8mm)							
Soldering conditions	Hand solder only – not reflow compatible. +260°C for 10 seconds							