



## Features and Benefits

Frequency range: 10MHz  
Supply voltage: 12V  
Steady current: 200mA Max  
Output waveform: Sinewave  
Frequency stability vs. operating temperature:  $\pm 0.5$ ppb  
Aging:  $\pm 0.02$ ppm per year  
Operating temperature: 0°C to +80°C  
Size: 35.4x26.7x15.8mm  
Package type: Through hole

## Typical Applications

Wireless Communications  
Test equipment  
Synthesizers

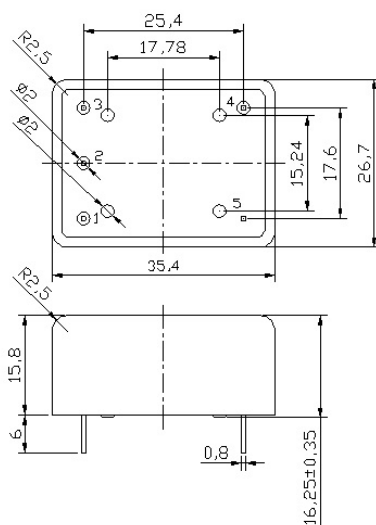
## Description

OCXO3307-10MHz-E-V offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

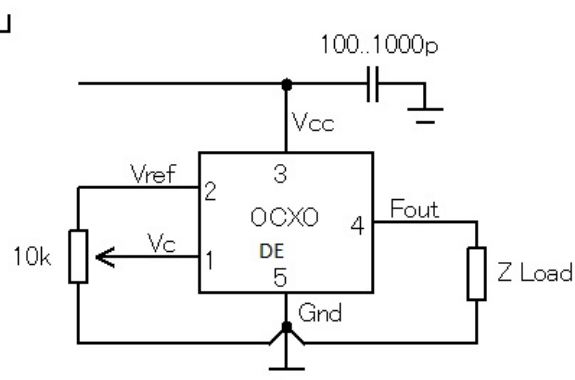
## Mechanical Drawing & Pin Connections

Drawing No: MD250006-1

**Physical dimensions**



**Schematic connections**





## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f <sub>0</sub>			10		MHz	
RF Output							
Signal Waveform			Sinewave				
Level			+7			dBm	note
Harmonics					-25	dBc	
Load			45	50	55	ohm	
Power Supply							
Reference Voltage	Vref		4	4.2	4.3	V	
Supply Voltage	Vcc		11.4	12	12.6	V	
Warm-up current		V <sub>CC</sub> =12V	250		550	mA	
Continuous current		at +25°C, V <sub>CC</sub> =12V			200	mA	
Frequency warm-up time		to df/f=1e-7 at +25°C ref at 15 min			180	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	(f <sub>L</sub> -f)/f	V <sub>C</sub> =0 V			-0.3	ppm	note
	(f-f)/f	V <sub>C</sub> =V <sub>C0</sub>		Æ		ppm	
	(f <sub>H</sub> -f)/f	V <sub>C</sub> =Vref	+0.3			ppm	note
EFC voltage	V <sub>C</sub>		0		4.3	V	
Input impedance	R <sub>in</sub>			11		Kohm	
Preset control voltage	V <sub>C0</sub>	disconnected V <sub>C</sub> pin	1.8	2.1	2.4	V	
Output resistance of Vref				91		ohm	
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±0.5	ppb	note
Initial Tolerance @+25°C	(f-f <sub>0</sub> )/f <sub>0</sub>	V <sub>C</sub> = V <sub>C0</sub>	-0.1		+0.1	ppm	note
Versus supply voltage		ref V <sub>CC</sub> typ.			±0.3	ppb	
Versus load		5% change			±0.3	ppb	
Allan deviation		1 s. 100 kHz BW			10	e-12	
SSB Phase noise (Static)		1Hz			-97	dBc/Hz	
		10Hz			-127		
		100Hz			-150		
		1KHz			-155		
		10KHz			-160		
		100KHz			-160		
Aging Per Day		After 30 days of operation			±0.2	ppb	
Aging 1 <sup>st</sup> Year					±0.02	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	0°C to +80°C						
Storage temperature range	-60°C to +90°C						
Power voltage	-0.5 to 14.4 V						
Control voltage	-1.0 to 6.0 V						
Air flow velocity	0.5 m/s maximum						
Humidity	Hermetically sealed						
Mechanical shock	Per MIL-STD-202, 30G, 11ms						
Vibration	Per MIL-STD-202, 5G to 500Hz						
Soldering conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)						
Washing conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						

Note: Included in the test data