



Features and Benefits

High frequency stability: ± 5 ppb over -20°C to $+70^{\circ}\text{C}$
 Low Allan deviation at $\leq 1.2 \times 10^{-12}$
 Steady state current consumption 250mA max. at $+25^{\circ}\text{C}$
 Sine wave output

Typical Applications

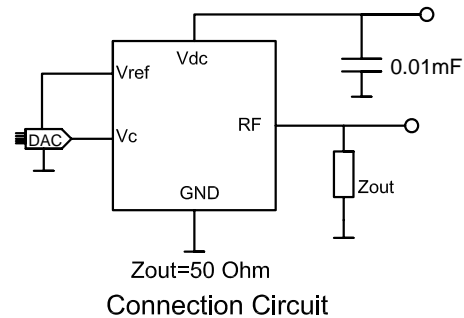
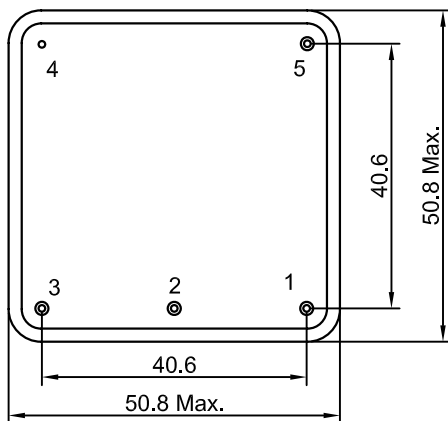
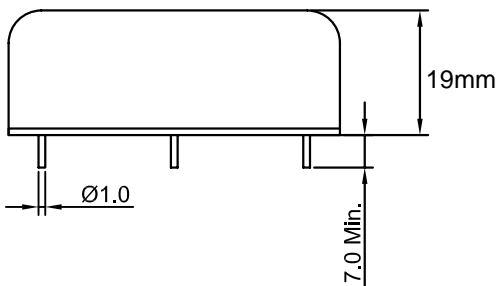
UHF Synthesizers
 SATCOM System
 Portable Microwave Applications

Description

OCXO5050Z series offers outstanding ± 5 ppb frequency stability and low Allan deviation performance all with steady state current consumption at $+25^{\circ}\text{C}$.

Mechanical Drawing & Pin Connections

Drawing No: MD170010-1



Pin Connections:

Pin#	Symbol	Function
1	Vc	Control Voltage
2	Vref	Reference Output
3	RF Out	RF Output
4	GND	Ground
5	Vdc	Supply Voltage

Unit : mm
 1mm=0.0394inch



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F _o			10.000000		MHz	
Output Signal			Sine Wave				
Output Level				5		dBm	±2 dBm
Output Load				50		Ω	±5%
Power Supply							
Supply Voltage	V _{cc}			+12.0		V	±5%
Steady State Current Consumption		@+25° C			250	mA	
Peak Current Consumption after switch on					600	mA	For warm-up
Warm-up Time:	T _{up}	at +25° C within accuracy		<5		min	≤±20 ppb
Frequency Control							
Vcontrol via external voltage	V _c		0		5.0	V	
Vcontrol via external potentiometer	V _c			20		kΩ	Optional
Frequency Tuning Range (adjustment)				>±0.3		ppm	Positive slope
Reference voltage Output	V _{ref}			+5.0		V	
Harmonic and subharmonics suppression				>30		dBc	
Frequency Stability							
Versus Operating Temperature		Over -20° C to +70° C		≤±5		ppb	
Versus 5% change in supply voltage				≤±0.5		ppb	
Versus 5% change in load				≤±0.5		ppb	
Versus Aging 1st year		After 30 days of operation		≤±10		ppb	
Phase noise @10 MHz carrier frequency Sine wave output and Vcc = 12V		1 Hz		<-105		dBc/Hz	
		10 Hz		<-135			
		100 Hz		<-155			
		1 KHz		<-160			
		10 KHz		<-161			
Short-Term Stability (Allan Deviation)		σ 1 sec		1.2 x 10 ⁻¹²			
Environmental Conditions							
Operating temperature range		-20° C to +70° C					