Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077
TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

OCXO2020ZS1
Through Hole Sinewave OCXO

Features and Benefits

Wide operating temperature range from -40° C to +85° C
High frequency stability vs. temperature
Low 1st year aging at ±30ppb

Typical Applications

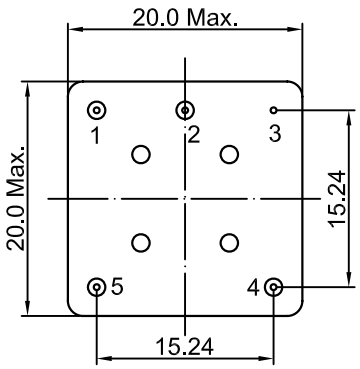
3G, CDMA
Networking
Instrumentation

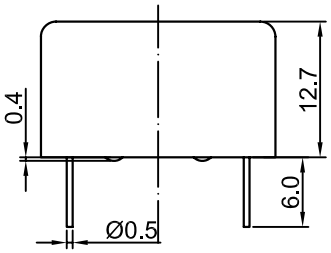
Description

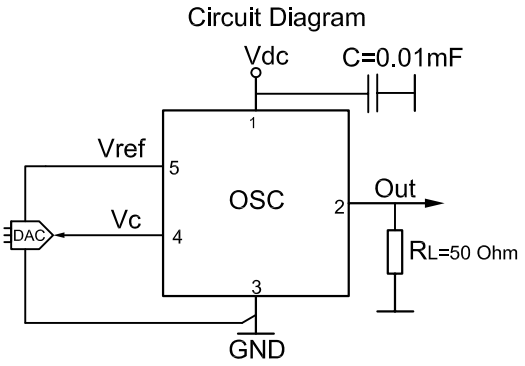
OCXO2020ZS1 series offers wide temperature operation from -40℃ to +85℃ with outstanding frequency stability and low 1st year aging at ±30ppb.

Mechanical Drawing & Pin Connections

Drawing No: MD140082-2







Pin Function

Pin	Signal
1	Vdc (Supply Voltage)
2	RF Output
3	GND
4	Vc (Control Voltage)
5	Vref

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency Range	F_{nom}		8.1920		20.0000	MHz	
Standard Frequencies				10.00, 12.80, 13.00, 16.384, 20.00		MHz	
Output waveform		>300 mV (rms)		Sine wave			
Output load				50		Ω	±10%
Reference voltage output	V_{ref}			4.5		V	
Power Supply							
Voltage	V_{cc}			5.0		V	±5%
Current Consumption		Steady State at +25° C		<400		mA	
Warm-up Time:	T_{up}	<±2 x 10^{-8} at +25° C		<3		min	Within spec
Frequency Control							
Frequency pulling range				≥±4 x 10^{-7}			Positive slope
Vcontrol via external voltage	V_c		+0		+4.5	V	
Vcontrol via external potentiometer				20		kΩ	
Frequency Stability							
Versus Operating Temperature (tighter stability on request)		-40° C to +85° C		≤±3.0		ppb	
		-20° C to +70° C		≤±2.0			
		-10° C to +60° C		≤±1.0			
Versus supply voltage change				≤±0.5		ppb	±5%
Versus load change				≤±0.5		ppb	±5%
Versus aging after 30 days of operation		1st year		≤±30.0		ppb	
Phase noise @10 MHz carrier frequency		10 Hz		-130		dBc/Hz	
		100 Hz		-150			
		1 KHz		-157			
		10 KHz		-159			
Short-Term Stability		Allan deviation per 1s		5		E-12	
Environmental Conditions							
Operating temperature range	-10° C to +60° C, -20° C to + 70°C or -40° C to 85° C						
Storage temperature range	-55° C to +85° C						
Vibration	Acceleration: 5 g; 10 Hz up to 200 Hz and down to 10 Hz, all 3 axes, 4.5 h/axis						
Shock	75 g; half-sine; 3 ms, (3 shocks each, 6 directions)						