



Features and Benefits

- Low Phase Noise
- Very Low Aging
- High Frequency Stability
- Hermetical sealed THD package
- Short lead time

Typical Applications

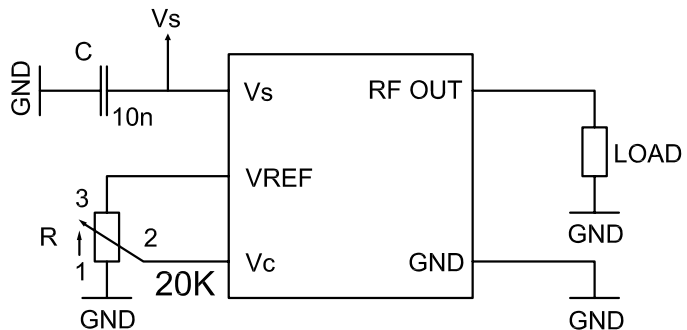
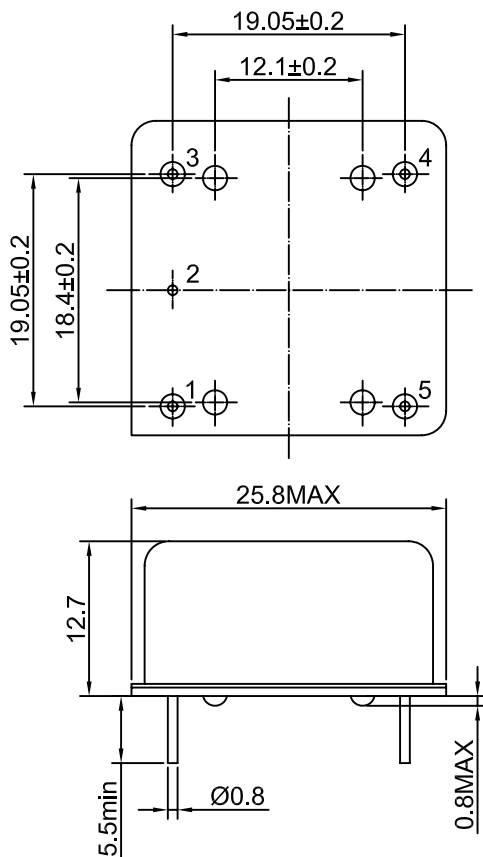
- Reference for microwave communication system
- Signal analyzer
- Reference for internal synthesizers
- SATCOM systems

Description

OCXO2525L family offers a specially designed 100MHz SC-cut crystal impedance matched to the oscillator and amplifier circuits to deliver consistent world class phase noise on all production shipment

Mechanical Drawing & Pin Connections

Drawing No:MD130022-3



Pin connections

PIN #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground
3	V_c	Control Voltage(EFC)
4	V_{REF}	Reference Voltage
5	V_s	Supply Voltage

Unit = mm
1mm=0.03937inch



Specifications

OCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range			80		125	MHz	
Standard Frequency	F _{norm}		100			MHz	
RF Output							
Output Waveform			Sine wave				
Load	R _L		50			Ohm	±5%
Output Level			+7			dBm	Note 2
Harmonics					-30	dBc	
Spurious					-90	dBc	
Warm-up time		$\Delta f_{final} / f_0$ <±0.1ppm		3	5	min	
G-Sensitivity					1.0	ppb/g	Per axis
Frequency Adjustment Range							
Electronic Frequency Control (EFC)			±1	±2		ppm	
EFC Voltage	V _C		0	V _{ref} / 2	V _{ref}	V	
EFC Slope	$\Delta f / \Delta V_C$		Positive				
EFC Input Impedance			100			kOhm	
Reference Voltage V _{ref} Output				10.0		V	Note 3
Power Supply							
Supply Voltage	V _S		11.4	12.0	12.6	V	Note 3
Current Consumption (Steady State)		@+25° C			150	mA	Note 4
Current Consumption (Warm-up)					350	mA	Note 4
Frequency Stability							
Initial Tolerance		@25° C			±300	ppb	V _C @ V _{ref} / 2
Vs. Operating Temperature Range		-20° C to +70° C			±20	ppb	Steady State
Vs. Supply Voltage Variation (pushing)		V _S ±5%			±10	ppb	
Vs. Load Change (pulling)		R _L ±5%			±5	ppb	
Aging	Per day	After 30 Days Operation		±1	±2	ppb	
	First year			±100	±200	ppb	
Phase Noise							
SSB Phase Noise @ 100MHz		@10Hz		-95		dBc/Hz	
		@100Hz		-130			
		@1KHz		-158			
		@10KHz		-168			
		>=100KHz		-175			
Absolute Maximum Ratings							
Supply Voltage	V _S		-0.5		V _S +10%	V	V _S to GND
Control Voltage	V _C		-0.5		15	V	V _C to GND
Environmental							
Operating Temperature Range		-20° C to +70° C					
Storage Temperature Range		-55° C to +125° C					
Enclosure (See drawing)		25.8 x 25.8 x 12.7 mm max					
Weight		20 g					
Packing		Palette					



Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated.
2. Other output level available on request.
3. Other supply and reference voltage available on request.
4. Maybe higher for wide operating temperature range.

Environmental Conditions						
Test	IEC 60068 Part...	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810F Method	MIL-PRF-55310D Clause	Test Conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20 2-58	5.6.3	208H 210F		3.6.52 3.6.48	Test Ta Method 1 Test Td ₁ Method 2 Test Td ₂ Method 2
Shock	2-27	5.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal	2-6	5.6.7.1	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0, 75mm, 55 Hz - 2 kHz, 10g
Vibration, random	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests - Aging - Extended aging		5.7.1 5.7.2	108A		4.8.35	30 days @ 85° C, OCXO @ 25° C, 1000h, 2000h, 8000h @ 85° C