



Features and Benefits

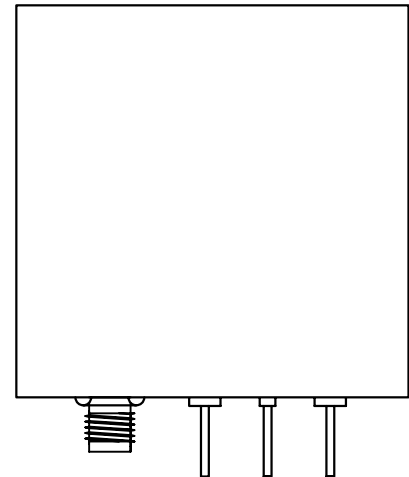
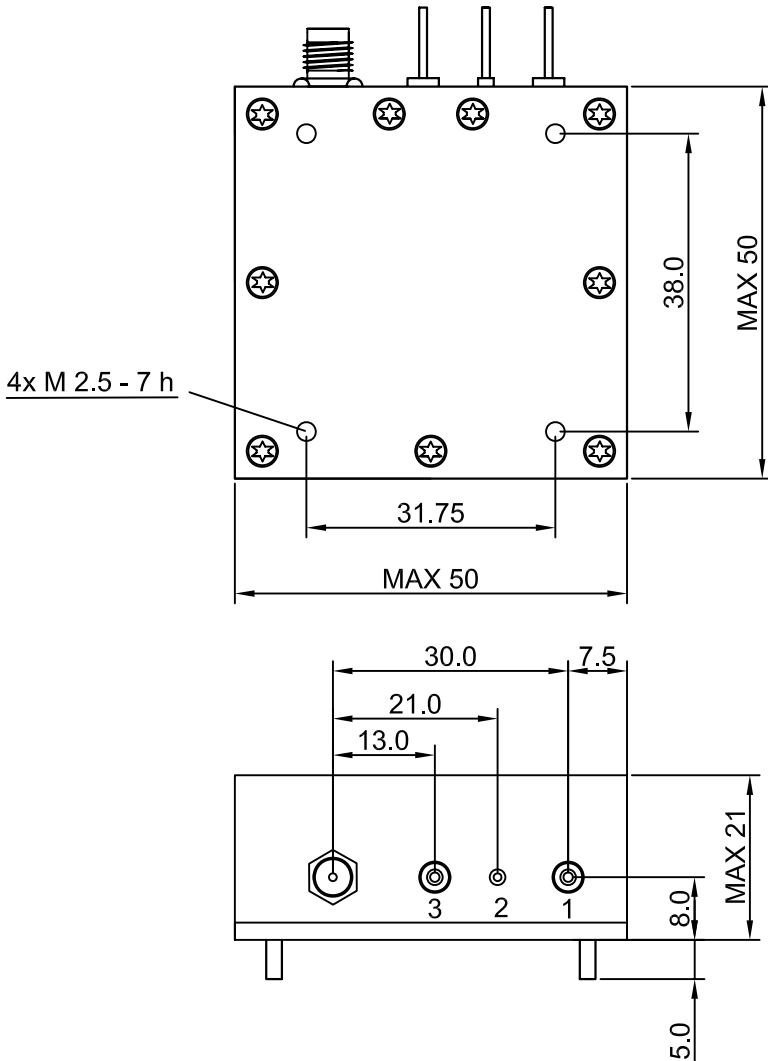
Phase Noise (typ.): -120 dBc/Hz at 100 KHz offset
 Sine Wave output

Typical Applications

Microwave Communications LO

Mechanical Drawing & Pin Connections

Drawing No: MD160080-1



Pin Connection:

Pin#	Symbol	Function
1	Vs	Supply Voltage
2	GND	Ground
3	LD	Lock Detect Output
SMA	RF OUT	RF Output

Unit in mm
 1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F ₀			2362.02		MHz	Multiplication (Note 2)
RF Output							
Output Waveform			Sine Wave				
Output Level			+10	+13		dBm	
Output Load		±5%	50			Ω	
Harmonics					-30	dBc	
Sub harmonics					-40	dBc	
Spurious					-80	dBc	(Note 3)
PLL Products					-60	dBc	
Lock Detect (LD) Output		Out of Lock		0	1.0	V	
		Locked	2.3	3.3			
Power Supply							
Supply Voltage	V _s		11.4	12.0	12.6	V	
Current Consumption				250	350	mA	
Frequency Stability							
Vs Operating Temperature Range		Over -40°C to +85°C		±0.5		ppm	
Initial Tolerance at +25°C		@ +25°C			±1.0	ppm	
Vs Supply Voltage Change	V _s	V _s ±5%			±0.1	ppm	
Vs Load change (Pulling)	R _L	R _L ±5%			±0.1	ppm	
Long Term Aging 1 st Year		After 30 days of operation			±1.0	ppm	
Phase Noise		@ 100 KHz		-110	-120	dBc/Hz	
Environmental Conditions							
Operating Temperature Range	-40°C to +85°C						
Storage Temperature Range	-55°C to +105°C						
Size	50.0 x 50.0 x 21.0 mm max.						
Weight	60g max.						

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Frequency multiplication factor N depends on output frequency f_{OUT}
3. Internal PLL with TCXO reference

Absolute Maximum Ratings

Parameter	Min.	Max.	Unit	Condition
Supply Voltage V _s	-0.5	V _s +10%	V	V _s to GND
Storage Temperature	-55	+105	°C	

Handling and Testing

Parameter	Procedure		Condition
Electrostatic Discharge (ESD)			
THD devices	IEC60749-26	HBM	2000V
SMD devices	IEC60749-27	MM	200V
Washable	Yes		
RoHS compliant	Yes		



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 Td1 Method 2 Test Td2 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