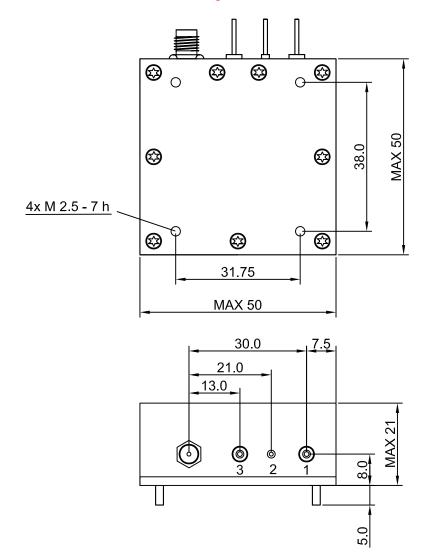
#### Features and Benefits

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

#### Typical Applications

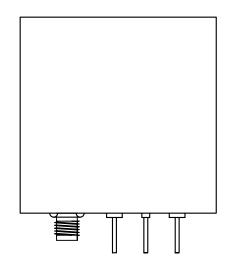
Microwave Communications LO

### 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



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## **Specifications**

Oscillator	Sym Condition	Value			Unit	Note		
Specification	Sym	Condition	Min.	Тур. Мах		Unit	Note	
Nominal Frequency	F <sub>0</sub>			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	Ì	
1 1 5 1 1 (1 5) 6 1 1		Out of Lock	0 1.0		1.0	1		
Lock Detect (LD) Output		Locked	2.3	3.3		V		
Power Supply				•		_	,	
Supply Voltage	Vs		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	Vs	V <sub>S</sub> ±5%			±0.1	ppm		
Vs Load change (Pulling)	$R_L$	R <sub>L</sub> ±5%			±0.1	ppm		
Long Term Aging1 <sup>st</sup> 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 four
- 3. Internal PLL with TCXO reference

# Absolute Maximum Ratings

Parameter	Min.	Max.	Unit	Condition
Supply Voltage V <sub>S</sub>	-0.5	V <sub>S</sub> +10%	V	V <sub>S</sub> 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		



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### **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