



Features and Benefits

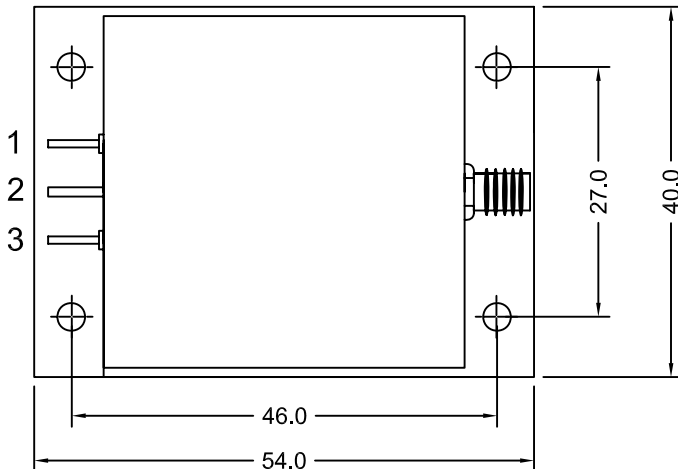
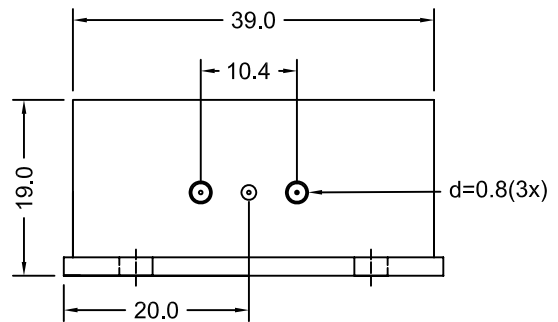
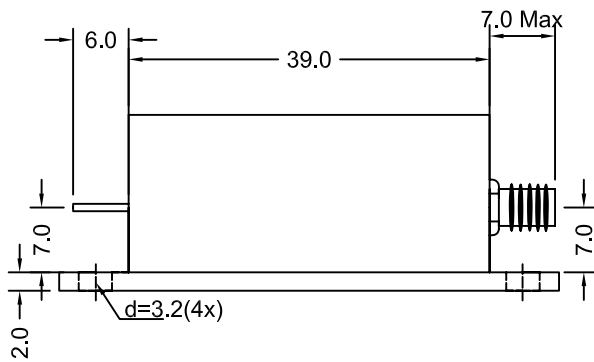
Frequency Stability: up to ± 0.5 ppm over -40°C to $+85^{\circ}\text{C}$
Sine Wave output

Typical Applications

Highly stable microwave LO module

Mechanical Drawing & Pin Connections

Drawing No: MD160079-1



Pin Connection:

Pin#	Symbol	Function
1	V _c	Control Voltage
2	GND	GND
3	V _s	Supply Voltage
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			1360.45		MHz	
RF Output							
Output Waveform			Sine Wave				
Output Level			+7	+10		dBm	
Output Load			50			Ω	
Harmonics				-45	-40	dBc	
Sub harmonics (multiples of f _{out} /10)				-45	-40	dBc	Refer to Note 2
Spurious					-80	dBc	
Power Supply							
Supply Voltage	V _s		11.4	12.0	12.6	V	Refer to Note 3
Current Consumption		Steady State at +25°C			80	mA	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)			±5			ppm	
EFC Voltage	V _c		0.5	2.5	4.5	V	
EFC Slope (Δf / ΔV _c)			Positive				
EFC Input Impedance			100			kΩ	
Frequency Stability							
Vs Operating Temperature Range		Over -40°C to +85°C		±0.5		ppm	
Initial Tolerance at +25°C		@ +25°C			±5	ppm	
Vs Supply Voltage Change	V _s	V _s ±5%			±1	ppm	
Vs Load change	R _L	R _L ±5%			±1	ppm	
Long Term Aging Per Year					±1	ppm	
Phase Noise			Please consult DEI				
Environmental Conditions							
Operating Temperature Range		-40°C to +85°C					
Storage Temperature Range		-55°C to +125°C					
Size		54.0 x 40.0 x 19.0 mm					
Weight		60g max.					

Notes

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Depending on frequency multiplication factor may be lower or higher than 10
3. Other supply voltages available on request

Absolute Maximum Ratings

Parameter	Min.	Max.	Unit	Condition
Supply Voltage V _s	-0.5	V _s +10%	V	V _s to GND
Control Voltage V _c	-0.5	6	V	V _c to GND
Storage Temperature	-55	+125	°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	2-20	5.6.3	208H		3.6.52	Test Ta Method 1
Resistance to soldering heat	2-58		210F		3.6.48	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			108A			
- Aging		5.7.1			4.8.35	30 days @ 85°C, OCXO @25°C
- Extended aging		5.7.2				1000h, 2000h, 8000h @85°C