

Specification	AXIOM160-2000	Issue: 01	Date: 2008-09-05
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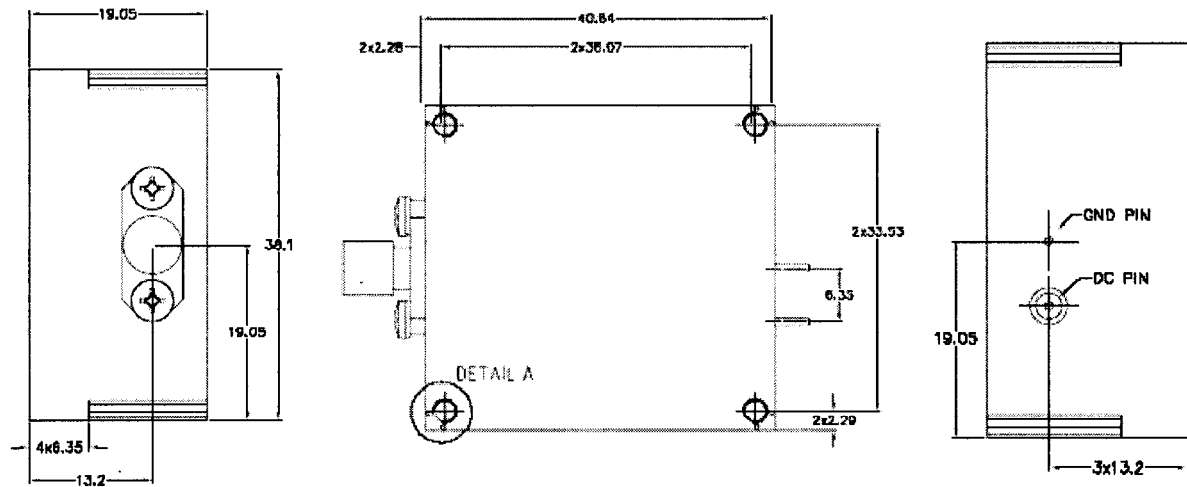
Oscillator type : OCXO with SMA connector and Low Phase Noise

Parameter	min.	typ.	max.	Unit	Condition
Nominal frequency	100.000			MHz	
Frequency stability					
Initial tolerance at delivery			± 0.2	ppm	@+25°C
vs. temperature in operating temperature range			± 2.0	ppm	-45°C~+85°C
vs. supply voltage variation			± 10	ppb	V _S ± 2%
vs. load change			± 10	ppb	R _L ± 10%
Long term (aging) per day			± 70	ppb/day	
Long term (aging) 1 st year			± 2	ppm	
Long term (aging) following years			± 0.5	ppm	
Frequency adjustment range					
Electronic Frequency Control (EFC)		N.A.			
RF output					
Signal waveform	Sine wave				
Load R _L	50			Ω	
Output level	+ 10		+15	dBm	
Harmonics			-30	dBc	
Power Supply Ripple Rejection (10 mVp-p)			-110	dBc	1 kHz to 10 MHz
Warm-up time			5	min	Δf/f ₀ < ± 0.5 ppm
Phase noise in quiet state		-147 -149 -160 -165 -165		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	@ 1kHz @ 2 kHz @ 10 kHz @ 100 kHz @ 1 MHz
Phase noise under vibration (vibration spectrum see table III)		-110		dBc/Hz	@ 2 kHz
Supply voltage V_S	11.4	12	12.6	V	
Current consumption (steady state)			270	mA	@ +25°C
Current consumption (warm-up)			580	mA	
Operating temperature range	-45		+85	°C	
Operable temperature range	-45		+90	°C	
Storage temperature range	-60		+100	°C	
Enclosure	40.64 x 38.1 x 19.05			mm	see drawing
Weight		40		gram	
Finish	Sulfamate Nickel over Electroless Ni				MIL-QQ-N-290 MIL-C-26074C Class 4
RF output connector	SMA-F removable				

Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1 and MIL-PRF-55310, unless otherwise stated

Enclosure drawing



Environmental conditions

Test	Reference	Test conditions
Mechanical shock	MIL-STD-810E Method 561.4, Procedure I, VI	Operating: 20g peak, saw tooth for 9 ms Non operating: 40g peak, saw tooth for 9 ms
Vibration, random, non operating	MIL-STD-202F Meth.214, letter G, fig.214-1, 1 hour each axis, $G_{rms} = 8.4$ g	10 Hz 0.0246 g^2/Hz 20 Hz 0.1308 g^2/Hz 40 Hz 0.1308 g^2/Hz 60 Hz 0.0134 g^2/Hz 400 Hz 0.0134 g^2/Hz 1360 Hz 0.048 g^2/Hz 2000 Hz 0.048 g^2/Hz
Vibration, random, operating	MIL-STD-202F Meth.214, letter G, fig.214-1, 10 min. each axis, $G_{rms} = 6.3$ g	10 Hz 0.0071 g^2/Hz 20 Hz 0.0213 g^2/Hz 1700 Hz 0.0213 g^2/Hz 2000 Hz 0.0071 g^2/Hz
Temperature shock (non operating)		-40°C / +85°C, change in 5 min. for 20 cycles, soak at each temperature extreme for 1 hour
Humidity	MIL-E-5400 Para 3.2.24.4	Up to 95 % RH, including condensation, operating and non-operating
Altitude		Sea level to 70000 feet in 2 minutes

Table 3: Environmental conditions

Quality assurance provisions

Test	Reference	Test conditions
Screening (ESS)		Burn-in 72 hours @ +95°C
		10 temperature shock cycles -55°C / +95°C, soak at each temperature extreme for 30 min.. Power applied at completion of cold cycle to completion of heat cycle
Gross leak	MIL-STD-883 Meth. 1014	Test condition C

Table 4: QA provisions