

Specification	AXIOM50	Issue: 01	Date: 2008-01-25
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Oscillator type : VHF OCXO - Ultra low noise

Parameter	min.	typ.	max.	Unit	Condition
Standard frequencies	100.000 / 120.000			MHz	
Frequency stability					
Initial tolerance			± 500	ppb	
vs. temperature in operating temperature range		± 200	± 500	ppb	steady state
Operating temperature range	-20		+70	°C	
vs. supply voltage variation			± 20	ppb	V _s ± 5%, within 10 min.
vs. load change			± 20	ppb	± 5%
Long term stability per day			± 2	ppb/day	After 30 days of continuous operation
Long term stability (aging rate)		± 500	± 1000	ppb/ year	
Frequency adjustment range					
Mechanical Frequency Control				ppm	N.A.
Electronic Frequency Control (EFC)				ppm	N.A.
EFC voltage V _C				V	
EFC slope (Δf / ΔV _C)					
EFC linearity				%	
EFC input impedance				kΩ	
RF output					
Signal waveform	Sine wave				
Load	50			Ω	± 10 %
Output amplitude	+11	+13	+15	dBm	
Harmonics			-30	dBc	
Sub-harmonics	N.A.			dBc	
Non-harmonics			-80	dBc	
Phase Noise L(f)		-90 -120 -150 -165 -165		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	@ 10 Hz @ 100 Hz @ 1000 Hz @ 10 kHz @ 200 kHz ~ 1 MHz
Warm-up time @ +25°C			3	min	Δf(1h)/f ₀ < ± 0.1 ppm
Supply voltage V _s	11.4	12	12.6	V	
Current consumption (steady state)			100	mA	@ +25°C
Current consumption (warm-up)			300	mA	
Operating temperature range	-32		+80	°C	
Operable temperature range	-40		+85	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing)	51x51x20.5max.			mm	
Weight			60	gram	
Packing	Palette				
ESD Sensitivity	1000			V	HBM as in IEC 61000-4-2

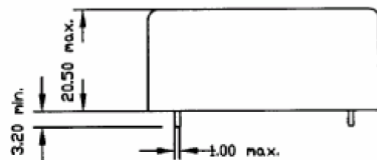
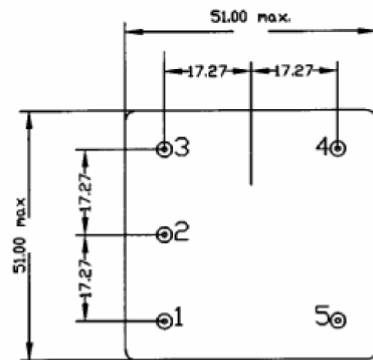
Notes:

- Terminology and test conditions are according to IEC standard IEC60679-1 and MIL-PRF55310, unless otherwise stated

Ordering Code:

Model (Specification)	Frequency [MHz]
AXIOM50	100.000

Enclosure drawing



Pin connections:

Pin #	Symbol	Function
1	N.C.	Not Connected
2	N.C.	Not Connected
3	RF OUT	RF Output
4	GND	Ground
5	Vs	Supply Voltage

Environmental conditions

Test	IEC 60068 Part	IEC 60679-1 Clause	MIL PRF-55310D Clause	Test conditions
Visual inspection, dimensions		4.3	4.2.2 4.8.1	Enclosure styles as in IEC 60679-3 or 61837, if applicable
Solderability	2-20	4.6.3	3.6.52	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		3.6.48	Test Tb Method 1A, 5s
Altitude				3 000 m operational 12 000 m transport
Shock*	2-27	4.6.8	3.6.40	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal*	2-6	4.6.7	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
Rapid change of temperature	2-14	4.6.5	3.6.44	Test Na, 10 cycles at extremes of operating temperature range
Dry heat	2-2	4.6.14		Test Ba, 16 h at upper temperature indicated by climatic category
Damp heat, cyclic*	2-30	4.6.15		Test Db variant 1 severity b), 55°C/95% r.H., 6 cycles
Cold	2-1	4.6.16		Test Aa, 2 h at lower temperature indicated by climatic category
Climatic sequence*	1-7	4.6.17		Sequence of 4.6.14, 4.6.15 (1 st cycle), 4.6.16, 4.6.15 (5 cycles)
Damp heat, steady state*	2-3	4.6.18		Test Ca, 56 days
Endurance tests				
- ageing		4.7.1	4.8.35	30 days @ 85°C, OCXO @25°C
- extended aging		4.7.2		1000h, 2000h, 8000h @85°C