

<b>Specification</b>	<b>AXIOM50</b>	Issue: 01	Date: 2008-01-25
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**Oscillator type :** VHF OCXO - Ultra low noise

Parameter	min.	typ.	max.	Unit	Condition
<b>Standard frequencies</b>	100.000 / 120.000			MHz	
<b>Frequency stability</b>					
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 <sub>s</sub> ± 5%, within 10 min.
vs. load change			± 20	ppb	± 5%
Long term stability per day			± 2	ppb/day	After 30 days of
Long term stability (aging rate)		± 500	± 1000	ppb/ year	continuous operation
<b>Frequency adjustment range</b>					
Mechanical Frequency Control				ppm	N.A.
Electronic Frequency Control (EFC)				ppm	N.A.
EFC voltage V <sub>C</sub>				V	
EFC slope ( $\Delta f / \Delta V_C$ )					
EFC linearity				%	
EFC input impedance				k $\Omega$	
<b>RF output</b>					
Signal waveform	Sine wave				
Load	50			$\Omega$	± 10 %
Output amplitude	+11	+13	+15	dBm	
Harmonics			-30	dBc	
Sub-harmonics	N.A.			dBc	
Non-harmonics			-80	dBc	
Phase Noise L(f)		-90		dBc/Hz	@ 10 Hz
		-120		dBc/Hz	@ 100 Hz
		-150		dBc/Hz	@ 1000 Hz
		-165		dBc/Hz	@ 10 kHz
		-165		dBc/Hz	@ 200 kHz ~ 1 MHz
Warm-up time @ +25°C			3	min	$\Delta f(1h)/f_0 < \pm 0.1$ ppm
<b>Supply voltage V<sub>S</sub></b>	11.4	12	12.6	V	
<b>Current consumption</b> (steady state)			100	mA	@ +25°C
<b>Current consumption</b> (warm-up)			300	mA	
<b>Operating temperature range</b>	-32		+80	°C	
<b>Operable temperature range</b>	-40		+85	°C	
<b>Storage temperature range</b>	-55		+105	°C	
<b>Enclosure (see drawing)</b>	51x51x20.5max.			mm	
<b>Weight</b>			60	gram	
<b>Packing</b>	Palette				
<b>ESD Sensitivity</b>	1000			V	HBM as in IEC 61000-4-2

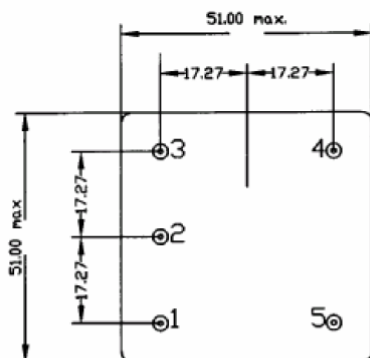
**Notes:**

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

**Ordering Code:**

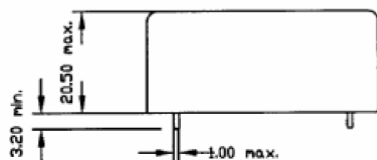
Model (Specification)	Frequency [MHz]
AXIOM50	100.000

## 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 <sup>st</sup> 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 - extended aging		4.7.1 4.7.2	4.8.35	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C