

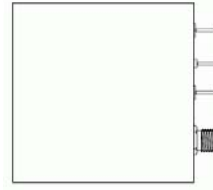
AXIOM5050

OCXO WITH LOW PHASE NOISE, CONNECTORIZED PACKAGE

FEATURES

- Connectorized Package size 50 x 50 x 21 mm.
- Low Phase Noise up to -170 dBc/Hz @ 100KHz
- Sine wave Output @ +7 dBm (50Ω)
- For use in Military, Airborn and Space applications

50 x 50 x 21 mm. max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	57		127	MHz	
Standard frequencies	80.000/100.000/125.000			MHz	
Frequency stability					
Initial tolerance at delivery @+25°C			± 300	ppb	@ V _c =0
vs. in operating temperature range		± 100	± 500	ppb	Steady state
operating temperature range	-20		+70	°C	
vs. supply voltage variation		± 20		ppb	V _s ± 5%
Long term (aging) per day			± 5	ppb/day	after 30 days operation
long term (aging) per year			± 200	ppb/year	after 30 days operation
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 1			ppm	
EFC voltage V _c	0		5	V	
EFC slope (Df / DV _c)		positive			
Nonlinearity				%	
EFC input impedance	100			kΩ	
RF output					
Signal waveform	Sine wave				R _L = 50 Ω
Output level	+ 7			dBm	
Harmonics			-30	dBc	
Spurious at rest			-110	dBc	
Phase noise @ 100 MHz		-100		dBc/Hz	@ 10 Hz
At rest			-130	dBc/Hz	@ 100 Hz
			-160	dBc/Hz	@ 1 kHz
			-168	dBc/Hz	@ 10 kHz
			-170	dBc/Hz	@ 100 kHz
Short-term stability (Allan Deviation)			1·10 ⁻¹⁰		t = 1 sec
Warm-up time @ 25°C			5	min	Df _{final} /f ₀ < ±0.2 ppm
Supply voltage V _s	11.4	12	12.6	V	
Current consumption (steady state)			300	mA	@ +25°C
Current consumption (warm-up)			500	mA	@ +25°C
Operable temperature range	-45		+90	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing) (LxWxH)	50x50x21 max.			mm	See drawing

Notes:

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

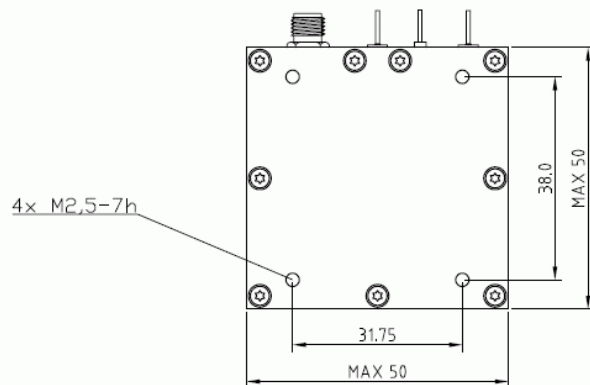
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Ordering Code (Part number):

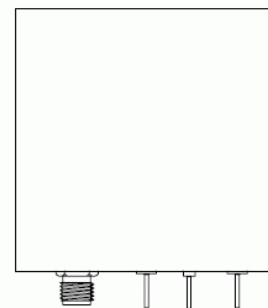
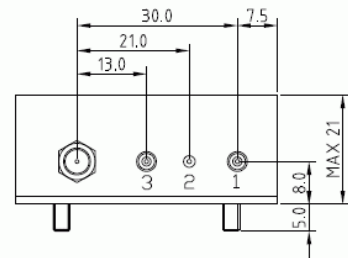
Model (Specification)	Frequency [MHz]
AXIOM5050	100.000

Enclosure drawing



Pin connections:

Pin #	Symbol	Function
1	V _s	Supply Voltage
2	GND	Ground
3	V _c	Control Voltage (EFC)
SMA	RF OUT	RF Output



Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
Sealing tests (if applicable)	2-17	4.6.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability	2-20	4.6.3	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		Test Tb Method 1A, 5s
Shock*	2-27	4.6.8	Test Ea, 3 x per 6 axes 50G, 11 ms half-sine pulse
Vibration, sinusoidal*	2-6	4.6.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Endurance tests			
- ageing		4.7.1	30 days @ 85°C, OCXO @25°C
- extended aging		4.7.2	1000h, 2000h, 8000h @85°C

*Endurance test

Rev. 1.0 dated 01-10-2012