

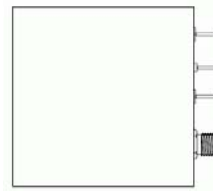
### AXIOM5050

### 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 (50 $\Omega$ )
- 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	
<b>Frequency stability</b>					
Initial tolerance at delivery @+25°C			$\pm 300$	ppb	@ $V_c=0$
vs. in operating temperature range		$\pm 100$	$\pm 500$	ppb	Steady state
operating temperature range	-20		+70	°C	
vs. supply voltage variation		$\pm 20$		ppb	$V_s \pm 5\%$
Long term (aging) per day			$\pm 5$	ppb/day	after 30 days operation
long term (aging) per year			$\pm 200$	ppb/year	after 30 days operation
<b>Frequency adjustment range</b>					
Electronic Frequency Control (EFC)	$\pm 1$			ppm	
EFC voltage $V_c$	0		5	V	
EFC slope (Df / DV <sub>c</sub> )		positive			
Nonlinearity				%	
EFC input impedance	100			k $\Omega$	
<b>RF output</b>					
Signal waveform	Sine wave				$R_L = 50 \Omega$
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)			$1 \cdot 10^{-10}$		t = 1 sec
Warm-up time @ 25°C			5	min	$Df_{final}/f_0 < \pm 0.2$ 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

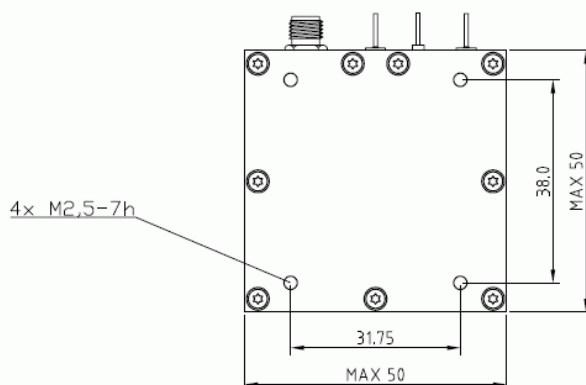
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#### Ordering Code (Part number):

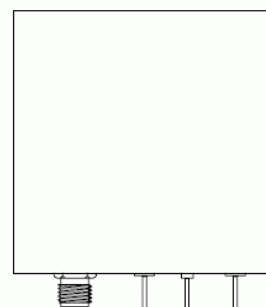
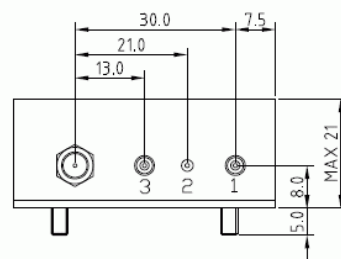
Model (Specification)	Frequency [MHz]
AXIOM5050	100.000

#### Enclosure drawing



#### Pin connections:

Pin #	Symbol	Function
1	V <sub>S</sub>	Supply Voltage
2	GND	Ground
3	V <sub>C</sub>	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