Specification	AXIS1000	Rev.: 1	Date: 2016-10-31

Oscillator type: UHF Low Phase Noise VCXO in connectorized package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	300		1300	MHz	
Nominal frequencies		1000.000 / 1200.000		MHz	
Frequency stability				ppm	
Initial tolerance @ 25°C			±5	ppm	@ V_C = 5 V
vs. operating temperature range			±50	ppm	(Note 2)
vs. supply voltage variation			±1	ppm	V_S ±5%
vs. load change			±1	ppm	R_L ±5%
Long term (aging) 1st year			±2	ppm	@ +25°C
Long term (aging) following years			±1	ppm	@ +25°C, per year
Frequency adjustment range					
Electronic frequency control (EFC)	±15			ppm	(Note 3)
EFC voltage V_C	0	+5	+10	V	
EFC slope ($\Delta f / \Delta V_C$)		Positive			
EFC input impedance	100			kΩ	
RF output					
Signal waveform		Sine wave			
Load		50		Ω	
Output level	+7	+11		dBm	
Harmonics		-50	-40	dBc	
Sub-harmonics (multiples of f_{OUT}/10)		-45	-40	dBc	(Note 4)
Spurious			-80	dBc	
Phase noise @ 1000 MHz		-140 -145 -147	-135 -140 -145	dBc/Hz dBc/Hz dBc/Hz	@ 10 kHz @ 100 kHz @ 1 MHz
Supply voltage V_S	11.4	12.0	12.6	V	(Note 5)
Current consumption (steady state)			60	mA	@ +25°C
Operating temperature range	-20		+70	°C	
Enclosure (see drawing) (LxWxH)		54x40x19		mm	h = 2.0 mm
Weight			60	g	
Packing		Palette			

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Other stabilities on request
3. Other tuning range and voltage on request
4. Depending on frequency multiplication factor may be lower or higher than 10
5. Other supply voltages on request

Absolute Maximum Ratings

Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	V_S + 10%	V	V_S to GND
Control Voltage V_C	-0.5	+15	C	V_C to GND
Storage Temperature	-55	+125	°C	

Ordering Code

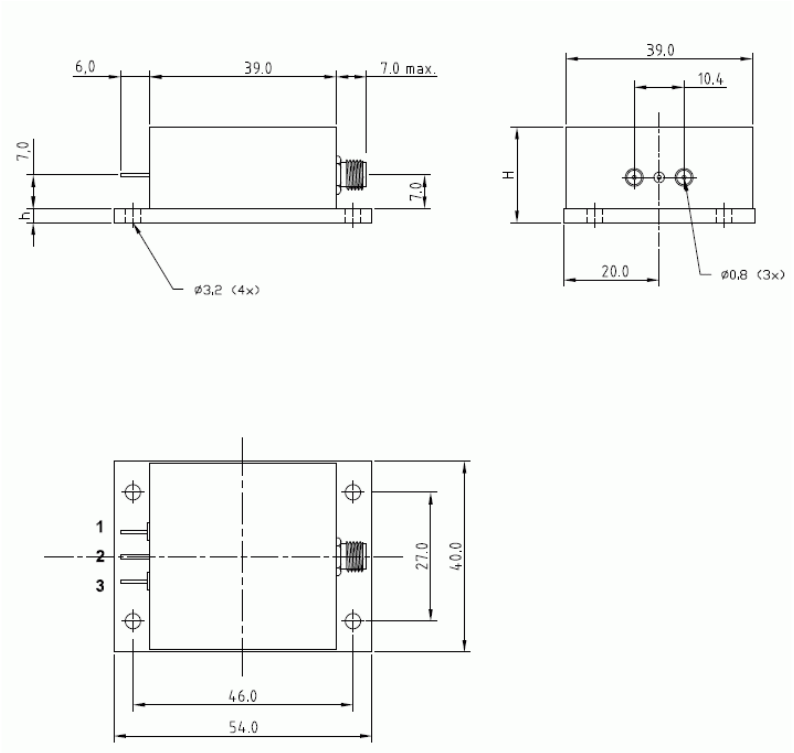
Model	Revision	Frequency [MHz]
AXIS1000	Rev.1	1000.000

Example: AXIS1000_Rev.1 – 1000.000 MHz

Handling and Testing

Parameter	Procedure		Source
Handling and Testing	Application Note AXAN-011		www.axtal.com
Processing	Application Note AXAN-012		www.axtal.com
Parameter	**Procedure**		**Condition**
Electrostatic discharge (ESD)			
THD devices	IEC60749-26	HBM	2000 V
SMD devices	IEC60749-27	MM	200 V
Washable	✖ Yes ☐ No		
RoHS compliant	✖ Yes ☐ No		

Enclosure drawing



Pin connections

Pin#	Symbol	Function
1	V_C	Control Voltage (EFC)
2	GND	Ground
3	V_S	Supply Voltage
SMA	RF OUT	RF Output

Environmental conditions

Test	IEC 60068 Part …	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810F Method	MIL-PRF-55310D Clause	Test conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20 2-58	5.6.3	208H 210F		3.6.52 3.6.48	Test Ta Method 1 Test Td_1 Method 2 Test Td_2 Method 2
Shock*	2-27	5.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal*	2-6	5.6.7.1	201A 204D	516.4-4	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
Vibration, random*	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests - ageing - extended aging		 5.7.1 5.7.2	108A		 4.8.35	 30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

Other environmental conditions on request

Data sheet is for information purposes only and may be subject to modifications or may be discontinued without notice.

Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
1	D0	31.10.2016	First issue	HH	HH