Specification	AXIS90	Rev.: 1	Date: 2016-10-31

Oscillator type: Wide-pull VHF/UHF VCXO in connectorized package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	500		1500	MHz	
Frequency stability					
Initial tolerance			±200	ppm	
vs. operating temperature			±20	ppm	(Note 2)
vs. supply voltage variation			±10	ppm	V_S ±5%
vs. load change			±10	ppm	R_L ±10%
Long term (aging) per year			±5	ppm	
Frequency adjustment range					
Electronic Frequency Control (EFC)	±1500			ppm	(Note 3)
EFC voltage V_C	-5		+5	V	
EFC slope ($\Delta f / \Delta V_C$)		Negative			
EFC non-linearity			±10	%	
EFC input impedance	100			kΩ	
RF output					
Signal waveform		Sine wave			
Load		50		Ω	±10%
Output level	+10	+13		dBm	
Harmonics			-30	dBc	
Spurious		-80	-60	dBc	Internal PLL
Phase noise			-90	dBc/Hz	@ 1 KHz
Supply voltage V_S	11.4	12.0	12.6	V	
Current consumption		100	250	mA	
Warm-up time @ 25°C			2	min	(Note 4)
Operating temperature range	0		+50	°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 over temperature on request
3. Other tuning characteristics on request
4. Oscillator is fully compliant after specified warm-up time

Absolute Maximum Ratings

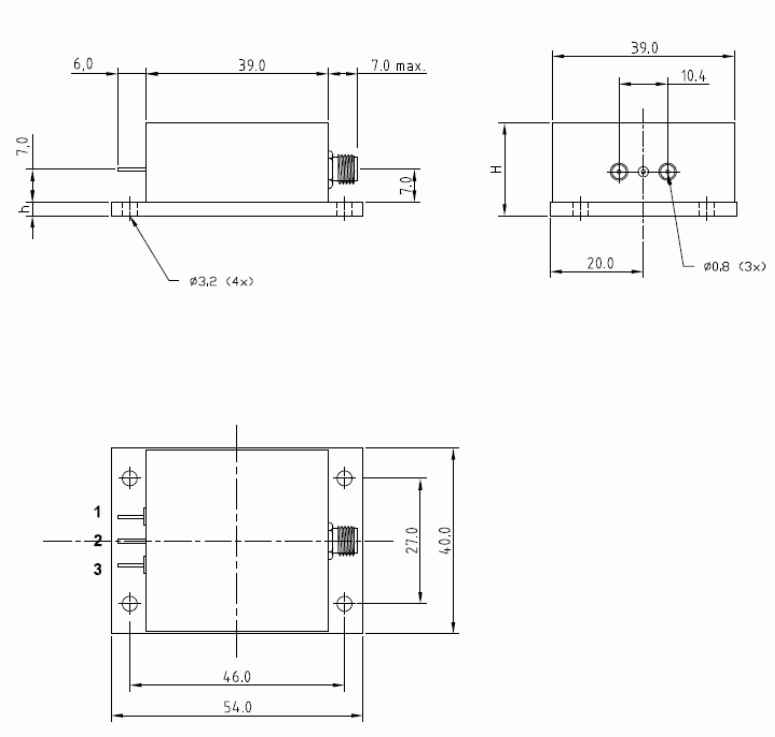
Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	V_S + 10%	V	V_S to GND
Control Voltage V_C	-10	+10	V	V_C to GND
Storage Temperature	-55	+105	°C	

Ordering Code

Model	Revision	Frequency [MHz]
AXIS90	Rev.1	1000.000

Example: AXIS90_Rev.1 – 1000.000 MHz

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

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		

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