

Specification	AXIOM260	Rev.: 3	Date: 2014-04-26
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Oscillator type: Low Phase Noise OCXO in Vibration-isolated Package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	60		125	MHz	
Nominal frequencies	100.000/120.000			MHz	
Frequency stability					
Initial tolerance @ +25°C			±300	ppb	@ V _C = 5V
vs. operating temperature range			±300	ppb	
vs. supply voltage variation (pushing)			±20	ppb	V _S ±5%
vs. load change (pulling)			±20	ppb	R _L ±10%
Long term (aging) per day			±2	ppb	after 30 days operation
Long term (aging) 1 st year			±200	ppb	after 30 days operation
Frequency adjustment range					
Electronic Frequency Control (EFC)	±1			ppm	
EFC voltage V _C	0	5	10	V	
EFC slope (Δf / ΔV _C)	Positive				
EFC input impedance	100			kΩ	
RF output					
Signal waveform	Sine wave				
Load R _L	50			Ω	±10%
Output level	+10			dBm	
Harmonics			-30	dBc	
Spurious			-90	dBc	
Warm-up time @+25°C			10	min	Δf _{final} /f ₀ < ±0.1 ppm
Phase noise under rest @ 100 MHz (Note 2)			-100	dBc/Hz	@ 10 Hz
			-130	dBc/Hz	@ 100 Hz
			-155	dBc/Hz	@ 1 kHz
			-160	dBc/Hz	@ 10 kHz
			-165	dBc/Hz	@ ≥100 kHz
Phase noise under random vibration	Consult factory				(Note 3)
G-sensitivity (Note 4)			0.1	ppb/g	per axis
Supply voltage V_S	11.4	12.0	12.6	V	
Current consumption (steady state)			400	mA	@ +25°C
Current consumption (warm-up)			800	mA	
Operating temperature range	-20		+70	°C	
Enclosure (see drawing) (LxWxH)	50x48x27			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. Better phase noise on request
3. Phase noise under random vibration depends on the vibration profile and level. Please consult factory
4. Overall G-sensitivity is a function of vibration frequency. Roll-off above 200 Hz.

Absolute Maximum Ratings

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

Ordering Code

Model	Revision	Frequency [MHz]
AXIOM260	Rev.3	100.000

Example: AXIOM260_Rev.3 – 100.000 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	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
RoHS- Compliant	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

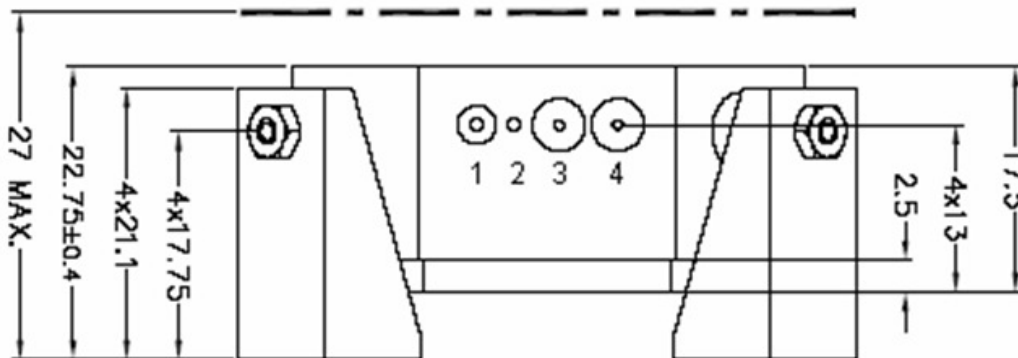
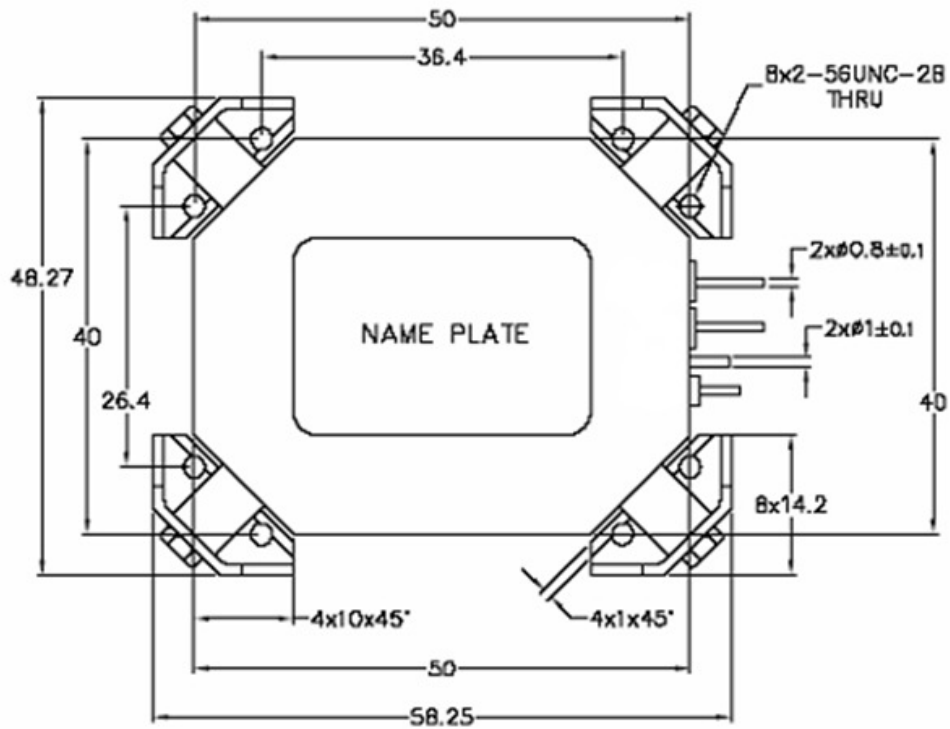
Environmental conditions

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	2-20	5.6.3	208H		3.6.52	Test Ta Method 1
Resistance to soldering heat	2-58		210F		3.6.48	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			108A			
- ageing		5.7.1			4.8.35	30 days @ 85°C, OCXO @25°C
- extended aging		5.7.2				1000h, 2000h, 8000h @85°C

Other environmental conditions on request

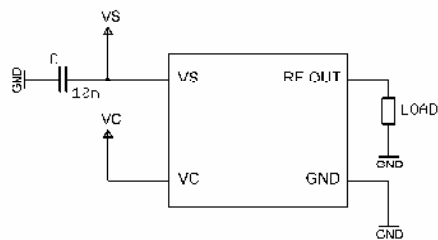
Data sheet is for information purposes only and may be subject to modifications or may be discontinued without notice.

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground
3	V _C	Control Voltage (EFC)
4	V _S	Supply Voltage



* See Application Note AXAN-011

Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
2	D0	01.10.2012	Major revision with screening option, editorial changes	BN	BN
3	D0	26.04.2014	Frequency range added, various parameters updated, environmental conditions updated, editorial changes	HH	HH