

Specification	AXIOM2520-11	Rev.: 1	Date: 2014-07-09
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Oscillator type: Low Phase Noise OCXO with Sine Wave Output

Was AXIOM2520_2012080201

Parameter	min.	typ.	max.	Unit	Condition
Nominal frequency	108.000			MHz	
Frequency stability					
Initial tolerance @ +25°C			±200	ppb	@ $V_C = V_{REF}/2$
vs. operating temperature range			±50	ppb	steady state
operating temperature range	-40		+85	°C	
vs. supply voltage variation			±10	ppb	$V_S \pm 5\%$
vs. load change			±5	ppb	$R_L \pm 5\%$
Long term (aging) per day			±3	ppb	after 30 days operation
Long term (aging) 1 st year		±100	±200	ppb	after 30 days operation
Long term (aging) following years		±50	±100	ppb	after 30 days operation
Frequency adjustment range					
Electronic Frequency Control (EFC)	±1	±2		ppm	(Note 2)
EFC voltage V_C	0		V_{REF}	V	
EFC slope ($\Delta f / \Delta V_C$)	Positive				
EFC input impedance	100			k Ω	
RF output					
Signal waveform	Sine wave				$R_L = 50 \Omega$
Output level	+7	+9	+11	dBm	
Harmonics			-30	dBc	
Spurious			-90	dBc	
Warm-up time			5	min	$\Delta f_{final}/f_0 < \pm 0.1$ ppm
Phase noise		-95 -125 -145 -155	-92 -122 -142 -152 -163	dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz
G-sensitivity			0.5	ppb/g	
Reference voltage V_{REF} output		4.0		V	
Supply voltage V_S	4.75	5.0	5.25	V	
Current consumption (steady state)			250	mA	@ +25°C
Current consumption (warm-up)			600	mA	
Operable temperature range	-45		+90	°C	
Storage temperature range	-55		+125	°C	
Enclosure (see drawing) (LxWxH)	24.8x20.3x13.2 max.			mm	
Weight			10	g	
Handling and Testing	In accordance with AXAN-011				www.axtal.com
Processing	In accordance with AXAN-012				www.axtal.com

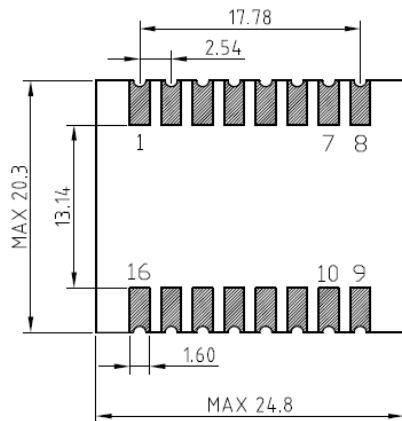
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Sufficient for aging compensation of at least 4 years incl. initial inaccuracy
3. Unit is RoHS compliant

Ordering Code (Part Number):

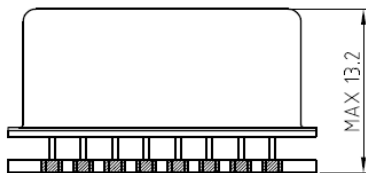
Model (Specification)	Revision	Frequency [MHz]
AXIOM2520-11	Rev.1	108.000

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	V _C	Control Voltage (EFC)
7	VREF	Reference Voltage
8	GND	Ground, Oven
9	OGND	Ground, Oscillator
10	RF OUT	RF Output
16	V _S	Supply Voltage



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 Resistance to soldering heat	2-20 2-58	4.6.3	Test Ta (235 ± 5)°C Method 1 Test Tb Method 1A, 5s
Shock*	2-27	4.6.8	Test Ea, 3 x per axes 100g, 6 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 - extended aging		4.7.1 4.7.2	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
1	D0	13.09.2012	Final P/N AXIOM2520-11	BN	BN
1	D1	21.11.2012	Max. phase noise added	BN	BN
1	D2	09.07.2014	Editorial changes	HH	HH