

Specification	AXIOM20S	Issue: 04	Date: 2008-04-04
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Oscillator type : OCXO in DIL14 package with Stratum III stability

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		20	MHz	
Standard frequencies	12.8 / 16.384 / 19.44 / 20.0			MHz	
Frequency stability				ppm	
Initial tolerance		± 500		ppb	@+25°C
vs. temperature in operating temperature range			± 280	ppb	steady state
operating temperature range	0		70	°C	Option II = "070"
	-20		70	°C	Option II = "2070"
	-40		85	°C	Option II = "4085"
vs. supply voltage variation		± 10		ppb	
vs. load change		± 10		ppb	
Holdover stability (over operating temperature range and $V_S \pm 1\%$)			± 0.37	ppm	TELCORDIA GR-1244 CORE Stratum III or ITU-T G.813 option 1
24 hours drift			± 40	ppb	
long term (aging) 1 st year			± 0.8	ppm	@ +40°C, after 30 days
Long term aging over 15 years			± 3.5	ppm	
Long term stability (overall) 15 years			± 4.6	ppm	Note 2
Frequency adjustment range					
Mechanical (internal trimmer)				ppm	N.A.
Electronic Frequency Control (EFC)				ppm	N.A.
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			10	ns	
Symmetry (duty cycle)	40		60	%	@ $V_S/2$
Warm-up time			5	min	$\Delta f_{final}/f_0 < \pm 0.5$ ppm
Supply voltage V_S	3.13	3.3	3.47	V	Option I = "33"
	4.75	5.0	5.25	V	Option I = "50"
Current consumption (steady state) @ +25°C			300	mA	Option I = "33"
			250	mA	Option I = "50"
Current consumption (warm-up)			800	mA	Option I = "33"
			500	mA	Option I = "50"
Enable/disable function					
Operable temperature range	-45		+90	°C	
Storage temperature range	-45		+90	°C	
Enclosure (see drawing)	20.7 x 13.1 x 11 max.			mm	IEC 60679-3 CO 02
Weight			5	gram	
Packing	Palette				
ESD Sensitivity	1500			V	HBM as in IEC 61000-4-2

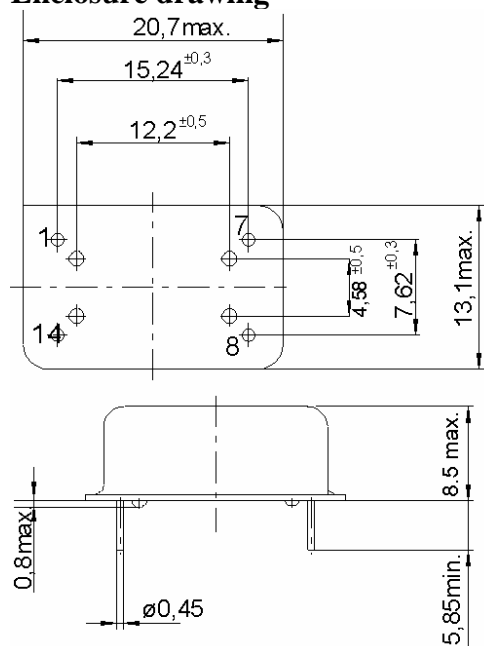
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Overall frequency stability = initial tolerance + temp.stability + supply & load change + aging

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIOM20S	33	070	12.800

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	N.C.	No Connection
7	GND	Ground
8	RF OUT	RF Output
14	Vs	Supply Voltage

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
Visual inspection, dimensions		4.3	Enclosure styles as in IEC 60679-3 or 61837, if applicable
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
Bump*	2-29	4.6.6	Test Eb, 4000 bumps per Axes, 40g, 6 ms
Free fall*	2-32	4.6.9	Test Ed procedure 1, 2 drops from 1m height
Vibration, sinusoidal*	2-6	4.6.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Rapid change of temperature	2-14	4.6.5	Test Na, 10 cycles at extremes of operating temperature range
Dry heat	2-2	4.6.14	Test Ba, 16 h at upper temperature indicated by climatic category
Damp heat, cyclic*	2-30	4.6.15	Test Db variant 1 severity b), 55°C/95% r.H., 6 cycles
Cold	2-1	4.6.16	Test Aa, 2 h at lower temperature indicated by climatic category
Climatic sequence*	1-7	4.6.17	Sequence of 4.6.14, 4.6.15 (1 st cycle), 4.6.16, 4.6.15 (5 cycles)
Damp heat, steady state*	2-3	4.6.18	Test Ca, 56 days
Endurance tests - ageing - extended aging		4.7.1 4.7.2	30 days @ 85°C, OCXO @ 25°C 1000h, 2000h, 8000h @ 85°C