

<b>Specification</b>	<b>AXIOM20</b>	Issue: 03	Date: 2005-07-15
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**Oscillator type : OCXO in DIL14 package, HCMOS Output**

Parameter	min.	typ.	max.	Unit	Condition
<b>Frequency range</b>	10		80	MHz	
<b>Standard frequencies</b>	10 / 12.8 / 16.384			MHz	
<b>Frequency stability</b>				ppm	
Initial tolerance		± 500		ppb	@+25°C, V <sub>C</sub> = 2.5V
vs. temperature (steady state)			± 100 ± 200 ± 300 ± 500	ppb ppb ppb ppb	Option II = "100" Option II = "200" Option II = "300" Option II = "500"
operating temperature range	-10		+60	°C	Note 2
vs. supply voltage variation			± 10	ppb	
vs. load change			± 20	ppb	
long term (aging) 1 <sup>st</sup> year (Note 3)			± 0.5	ppm	@ +40°C, after 30 days
<b>Frequency adjustment range</b>					
Electronic Frequency Control (EFC)	± 2		± 5	ppm	
EFC voltage V <sub>C</sub>	0.15 0.25	1.65 2.5	3.15 4.75	V V	Option I = "33" Option I =50"
EFC slope (Δf / ΔV <sub>C</sub> )	positive				
EFC linearity				%	
EFC input impedance	100			kΩ	
<b>RF output</b>					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			10	ns	
Symmetry	40		60	%	
Warm-up time			2	min	Δf <sub>final</sub> /f <sub>0</sub> < ±0.1 ppm
<b>Supply voltage V<sub>S</sub></b>	3.13 4.75	3.3 5.0	3.47 5.25	V V	Option I = "33" Option I =50"
<b>Current consumption</b> (steady state) @ +25°C			300 200	mA mA	Option I = "33" Option I =50"
<b>Current consumption</b> (warm-up)			800 500	mA mA	Option I = "33" Option I =50"
<b>Enable/disable function</b>					
<b>Operable temperature range</b>	-30		+75	°C	
<b>Storage temperature range</b>	-40		+85	°C	
<b>Enclosure (see drawing)</b>	20.7x13.1x8.5 max.			mm	IEC 60679-3 CO 02
<b>Weight</b>			5	gram	
<b>Packing</b>	Palette or stick				
<b>ESD Sensitivity</b>	1500			V	HBM as in IEC 61000-4-2

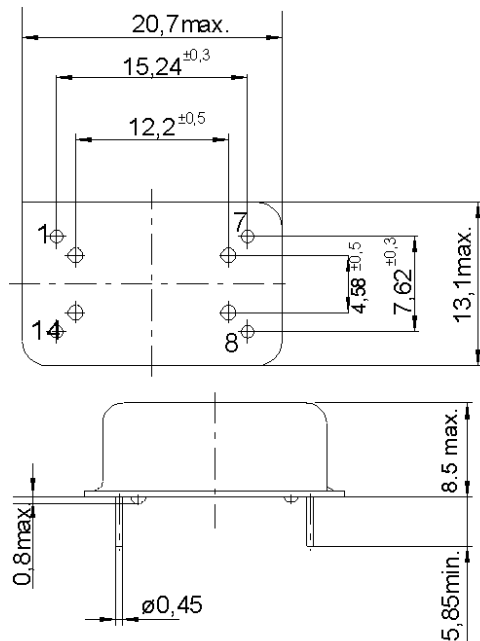
**Notes:**

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Operating temperature range -20°C to +70°C on request
3. Aging of ± 0.2 ppm / 1<sup>st</sup> year on request

**Ordering Code:**

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIOM20	50	100	10.000

## Enclosure drawing



## Pin connections

Pin #	Symbol	Function
1	V <sub>C</sub>	Voltage Control (EFC)
7	GND	Ground
8	RF OUT	RF Output
14	V <sub>S</sub>	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 <sup>st</sup> 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