

**Datasheet**

**AXIOM20**

**OCXO IN DIL14 PACKAGE, HCMOS OUTPUT**

**FEATURES**

- DIL14 holder size 20.7 x 13.1 x 8.5 mm.
- HCMOS output
- Till +/-50 ppb stability over temperature range
- Standard Frequencies 10 / 12.8 / 16.384 / 20.0 MHz

20.7 x 13.1 x 8.5 mm max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		80	MHz	
Standard frequencies	10 / 12.8 / 16.384 / 20.000			MHz	
Frequency stability				ppm	
Initial tolerance		± 500		ppb	@+25°C, V <sub>c</sub> = 2.5V
vs. operating temperature range (steady state)			± 50	ppb	Option II = "50"
			± 100	ppb	Option II = "100"
			± 200	ppb	Option II = "200"
			± 300	ppb	Option II = "300"
			± 500	ppb	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	1.65	3.15	V	Option I = "33"
	0.25	2.5	4.75	V	Option I = "50"
EFC slope (Df / DV <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	Df <sub>final</sub> /f <sub>0</sub> < ±0.1 ppm
Supply voltage V <sub>s</sub>	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"
			200	mA	Option I = "50"
Current consumption (warm-up)			800	mA	Option I = "33"
			500	mA	Option I = "50"
<b>Enable/disable function</b>					
Operable temperature range	-30		+75	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing)	20.7x13.1x8.5 max.			mm	IEC 60679-3 CO 02
Weight			5	gram	
Packing	Palette or tube				
ESD Sensitivity	1500			V	HBM, IEC 61000-4-2

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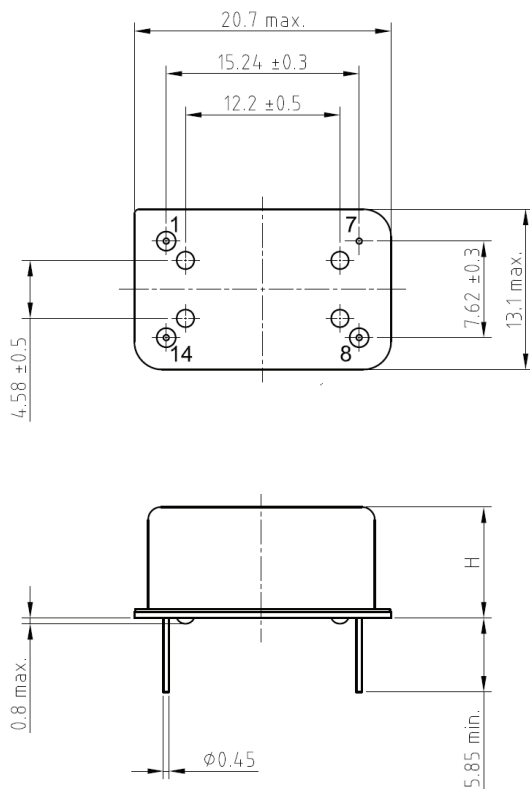
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature range on request
3. Aging of  $\pm 0.2$  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
Sealing tests (if applicable)	2-17	4.6.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability	2-20	4.6.3	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		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		4.7.1	30 days @ 85°C, OCXO @ 25°C
- extended aging		4.7.2	1000h, 2000h, 8000h @ 85°C

Other environmental conditions on request

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