

## Datasheet

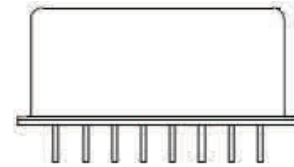
### AXIOM30HP

### HIGH PERFORMANCE OCXO IN CO15 16-PIN PACKAGE

24.8 x 20.3 x 11 mm max. CO15-7

## FEATURES

- High Performance OCXO
- Standard holder CO15 thru hole 16-pin
- Low Phase Noise -150 dBc/Hz
- Sine wave output signal



Parameter	min.	typ.	max.	Unit	Condition
<b>Nominal frequency</b>		10.000		MHz	
<b>Frequency stability</b>				ppm	
Initial tolerance		± 20	± 50	ppb	@V <sub>C</sub> = V <sub>REF</sub> /2 ± 10%
vs. operating temperature range			± 5	ppb	steady state
operating temperature range	-10		+60	°C	
vs. supply voltage variation		± 0.5		ppb	
vs. load change			± 0.5	ppb	
long term (aging) per day			± 0.5	ppb/day	@+40°C, after 30 days
long term (aging) 1 <sup>st</sup> year			± 30	ppb	@+40°C, after 30 days
long term (aging) per 15 years after			± 500	ppb	
<b>Frequency adjustment range</b>					
Electronic Frequency Control (EFC)	± 0.8	± 1		ppm	
EFC voltage V <sub>C</sub>	0	2.5	VREF	V	
EFC slope (Df / DV <sub>C</sub> )		Positive			
EFC input impedance	100			kΩ	
<b>RF output</b>					
Signal waveform		Sine wave			
Load		50		Ω	± 10 %
Output level	+5		+10	dBm	
Harmonics			-20	dBc	
Warm-up time @25°C		5	10	min	Df <sub>final</sub> /f <sub>0</sub> < ±10 ppb
Phase noise			-100	dBc/Hz	@ 1Hz
			-130	dBc/Hz	@ 10 Hz
			-145	dBc/Hz	@ 100 Hz
			-150	dBc/Hz	@ 1 kHz
			-150	dBc/Hz	@ 10 kHz
			-150	dBc/Hz	@ 100 kHz
<b>Short term stability</b> (Allan Deviation ADEV)		5·10 <sup>-12</sup> 1·10 <sup>-11</sup>	1·10 <sup>-10</sup>		t = 1 s t = 10 s t = 100 s
<b>Reference Voltage Output</b>		5.0		V	I <sub>Load</sub> max. 100 μA
<b>Oven alarm output (pin 2)</b>		LOW = alarm (not stable) HIGH = ready			0 ... 0.4 V 2.4 ... 5 V
<b>Oscillator Enable input (pin 6)</b>		LOW = Oscillator OFF HIGH = Oscillator ON			HCMOS compatible
<b>Supply voltage V<sub>s</sub></b>	11.4	12	12.6	V	
<b>Current consumption</b>			100	mA	steady state, @ +25°C
<b>Current consumption (warm-up)</b>			350	mA	
<b>Storage temperature range</b>	-40		+85	°C	
<b>Enclosure (see drawing)</b>		24.8x20.3x11 max.		mm	IEC 60679-3 CO15-7
<b>Weight</b>			10	gram	
<b>Packing</b>		Palette			IEC 60286-3

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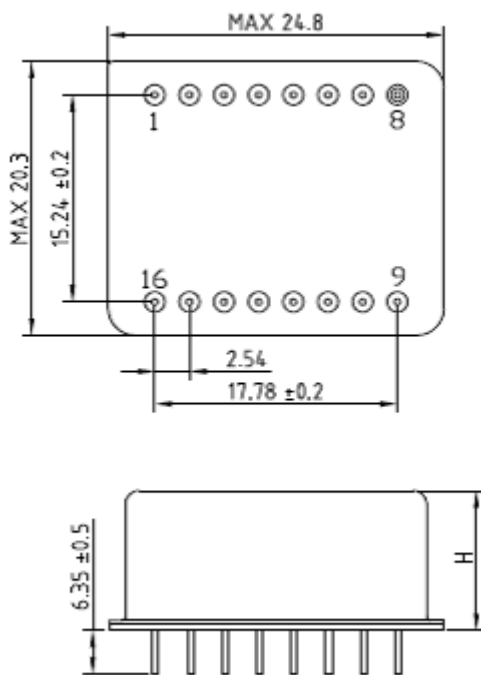
### AXIOM30HP

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#### Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated

#### Enclosure drawing:



#### Pin connections

Pin #	Symbol	Function
1	V <sub>S</sub>	Supply Voltage
2	OE	Oscillator Enable Input
3	N.C.	No connection
4	I.C.	Do not connect !
5	N.C.	No connection
6	N.C.	No connection
7	RF OUT	RF Output
8	GND	Ground
9	N.C.	No connection
10	OA	Oven Alarm Output
11	N.C.	No connection
12	N.C.	No connection
13	N.C.	No connection
14	N.C.	No connection
15	V <sub>C</sub>	Control Voltage (EFC)
16	V <sub>REF</sub>	Reference 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

Rev. 4.1 date 01-10-2012