

Specification	AXIOM10HP	Issue: 03	Date: 2009-09-22
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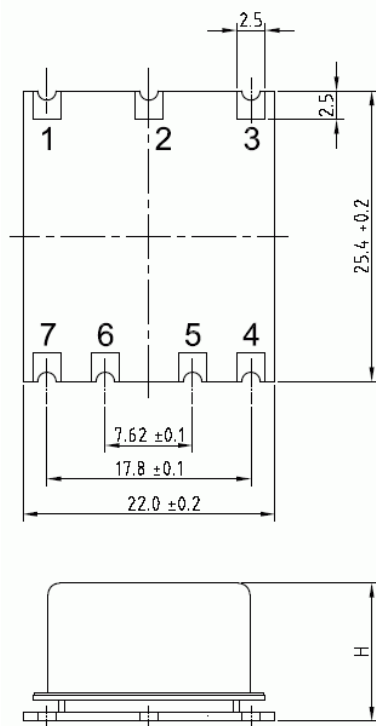
Oscillator type : High-performance OCXO in SMD package

Parameter	min.	typ.	max.	Unit	Condition
Nominal frequency	10.000			MHz	
Frequency stability				ppm	
Initial tolerance		± 20	± 50	ppb	@V _C = V _{REF} /2 ± 10%
vs. temperature (steady state)			± 5	ppb	
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 st year			± 30	ppb	@+40°C, after 30 days
long term (aging) per 15 years after			± 500	ppb	
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 1			ppm	
EFC voltage V _C	0	2.5	V _{REF}	V	
EFC slope (Δf / ΔV _C)	Positive				
EFC input impedance	100			kΩ	
RF output					
Signal waveform	Sine wave				
Load	50			Ω	± 10 %
Output level	+5		+10	dBm	
Harmonics			-20	dBc	
Warm-up time @25°C		5	10	min	Δf _{final} /f ₀ < ±10 ppb
Phase noise			-100	dBc	@ 1Hz
			-130	dBc	@ 10 Hz
			-145	dBc	@ 100 Hz
			-150	dBc	@ 1 kHz
			-150	dBc	@ 10 kHz
			-150	dBc	@ 100 kHz
Short term stability (Allan deviation)		5·10 ⁻¹² 1·10 ⁻¹¹	1·10 ⁻¹⁰		τ = 1 s τ = 10 s τ = 100 s
Reference Voltage Output V_{REF}		5.0		V	
Oven alarm output (pin 2)	LOW = alarm (not stable) HIGH = ready				0 ... 0.4 V 2.4 ... 5 V
Oscillator Enable input (pin 6)	LOW = Oscillator OFF HIGH = Oscillator ON				HCMOS compatible
Supply voltage V_S	11.4	12	12.6	V	
Current consumption (steady state, @ +25°C)			100	mA	
Current consumption (warm-up)			350	mA	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing)	25.6x22.2x14 max.			mm	IEC 61837 CO 28
Weight			10	gram	
Packing	Tape & reel				IEC 60286-3
ESD Sensitivity	1500			V	HBM IEC 61000-4-2

Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Handling and Testing conditions see AXTAL Application Note AXAN-011 (www.axtal.com)
3. Processing conditions see AXTAL Application Note AXAN-012 (www.axtal.com)

Enclosure drawing:



Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	OA	Oven Alarm Output
3	GND	Ground
4	V _{REF}	Reference Voltage
5	V _C	Control Voltage (EFC)
6	OE	Oscillator Enable Input
7	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

Other environmental conditions on request