

Specification	AXIOM70	Issue: 01	Date: 2007-05-14
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Oscillator type : OCXO with HCMOS Output

Parameter	min.	typ.	max.	Unit	Condition
Frequency Range	10		40		
Standard frequencies	10.000 / 12.800 / 19.440			MHz	
Frequency stability					
Initial tolerance at delivery			± 500	ppb	@+25°C @ V _C = 2.5 V
vs. temperature in operating temperature range			± 200	ppb	Option II = "200"
			± 100	ppb	Option II = "100"
			± 50	ppb	Option II = "50"
			± 25	ppb	Option II = "25"
			± 10	ppb	Option II = "10"
operating temperature range	-10		+60	°C	
vs. supply voltage variation			± 10	ppb	V _S ± 5%
vs. load change			± 10	ppb	R _L ± 5%
Long term (aging) per day, after 30 days operation		± 5	± 10	ppb	Option II="200", "100"
		± 1	± 2	ppb	Option II="50", "25", "10"
long term (aging) 1 st year, after 30 days operation			± 200	ppb	Option II="200", "100"
			± 100	ppb	Option II="50", "25", "10"
Frequency adjustment range					
Electronic Frequency Control (EFC) range	± 3			ppm	Option II = "200", "100"
	± 0.8	± 1		ppm	Option II="50", "25", "10"
EFC voltage V _C	0.15		3.15	V	Option I = "33"
	0.25		4.75	V	Option I = "50"
EFC slope ($\Delta f / \Delta V_C$)	positive				
EFC input impedance	100			kΩ	
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			10	ns	
Symmetry (duty cycle)	40		60	%	
Warm-up time			5	min	$\Delta f_{\text{final}}/f_0 < \pm 0.1$ ppm
Supply voltage V_S	3.15	3.3	3.45	V	Option I = "33"
	4.75	5.0	5.25	V	Option I = "50"
Current consumption (steady state) @ +25°C			350	mA	Option I = "33"
			250	mA	Option I = "50"
Current consumption (warm-up)			900	mA	Option I = "33"
			600	mA	Option I = "50"
Operable temperature range	-20		+70	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing)	25.8x25.8x13.5 max.			mm	
Weight			10	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

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIOM70	50	25	10.000

Enclosure drawing

AXTAL GmbH & Co. KG

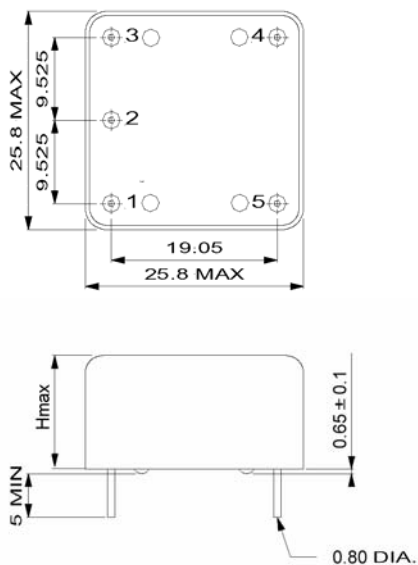
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Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground, case
3	V _C	Control Voltage (EFC)
4	N.C.	No Connection
5	V _S	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