

Specification	AXIOM100	Issue: 01	Date: 2009-10-26
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Oscillator type : Double Oven OCXO (DOCXO)

Parameter	min.	typ.	max.	Unit	Condition
Nominal frequencies	5.000 / 10.000			MHz	
Frequency stability					
Initial tolerance			± 100	ppb	@+25°C, @V _C =2.5 V
vs. operating temperature (steady state)			± 0.5	ppb	Option I = "05"
			± 0.2	ppb	Option I = "02"
			± 0.1	ppb	Option I = "01"
vs. supply voltage variation			± 0.5	ppb	V _s ± 5%
vs. load change		± 0.1		ppb	R _L ± 10%
Long term stability per day		± 0.1		ppb/day	Note 2
Long term stability (aging) per year		± 20	± 50	ppb/year	Note 2
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 1		± 2	ppm	
EFC voltage V _C	0	2.5	VREF	V	
EFC slope (Δf/ΔV _C)	positive				
EFC input impedance	100			kΩ	
RF output					
Signal waveform	Sine wave				
Output level	+7		+10	dBm	@ 50 Ω
Harmonics and subharmonics			-35	dBc	
Spurious			-80	dBc	0 ~ 100 MHz
Phase noise (at rest) @ 10.000 MHz			-95	dBc/Hz	@ 1 Hz
			-125	dBc/Hz	@ 10 Hz
			-142	dBc/Hz	@ 100 Hz
			-145	dBc/Hz	@ 1 kHz
			-145	dBc/Hz	@ 10 kHz
			-145	dBc/Hz	@ 100 kHz
Warm-up time @ +25°C			7	Min	Δf(1h)/f ₀ < ± 20 ppb
Reference voltage output V_{REF}		5.0		V	Load ≥ 10 kΩ
Supply voltage V_S	11.4	12	12.6	V	
Current consumption (steady state)		200	300	mA	@ +25°C
Current consumption (warm-up)		500	1000	mA	
Operating temperature range	0		+50	°C	Note 3
Operable temperature range	-10		+80	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing) L x W x H	51 x 51 x 20.1 max.			mm	
Weight			100	gram	
RoHS	Compliant				

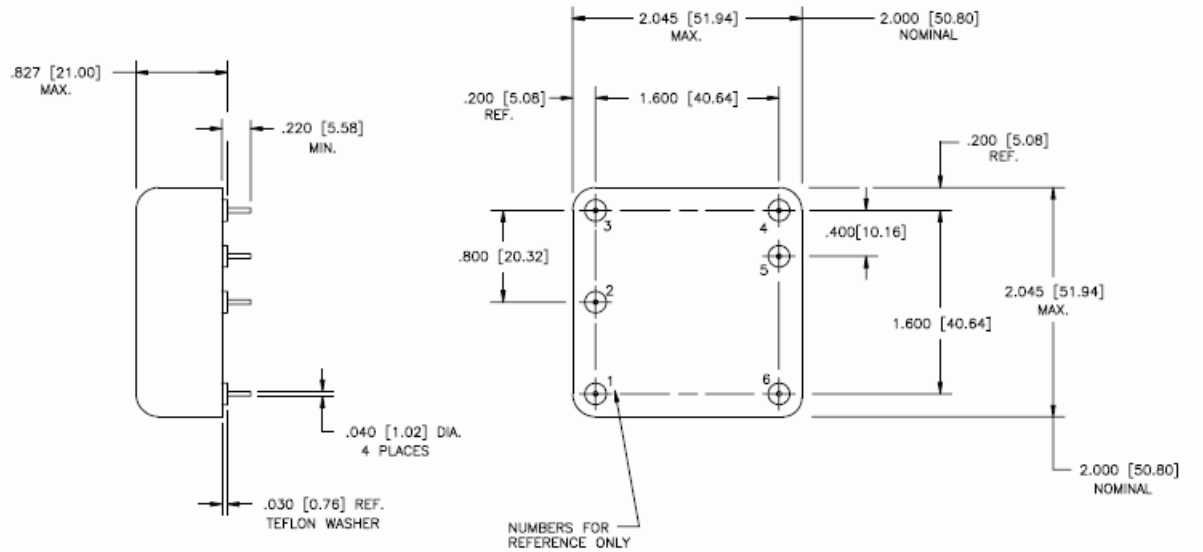
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. after 30 days of continuous operation
3. Other operating temperature ranges on request

Ordering Code:

Model (Specification)	Option I Stability	Frequency [MHz]
AXIOM100	02	10.000

Enclosure drawing



Pin connections:

Pin #	Symbol	Function
1	VC	Control Voltage (EFC)
2	VREF	Reference Voltage
3	RF OUT	RF Output
4	GND	Ground
5	GND	Ground
6	VS	Supply Voltage

Environmental conditions

Test	IEC 60068-2 Part ...	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810E Method	MIL-PRF-55310D Clause	Test conditions
Sealing tests (if applicable)	2-17	4.6.2	112E		3.6.1.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability	2-20	4.6.3	208H		3.6.52	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		210F		3.6.48	Test Tb Method 1A, 5s
Shock*	2-27	4.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axes 50g, 5 ms half-sine pulse
Vibration, sinusoidal*	2-6	4.6.7	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axes, 10 Hz ~ 55 Hz 0,37 mm; 55 Hz ~ 200 Hz, 5 g
Vibration during operation	2-6	4.6.7	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Sinusoidal: 1 g , 5 Hz ~ 100 Hz plus Random: 5 Hz ~ 350 Hz: 0.015 g ² /Hz, 350 Hz ~ 500 Hz: -6 dB/octave, equivalent to 2.6 g rms
Endurance tests - ageing - extended aging		4.7.1 4.7.2	108A		4.8.35	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

*non-operating, endurance