AXTAL ADVANCED XTAL PRODUCTS

Specification	AXIOM40	Issue: 05	Date: 2009-04-02

Oscillator type : OCXO high stability, HCMOS Output

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	5		40	MHz	
Standard frequencies	10 / 16.384 / 20.000			MHz	
Frequency stability				ppm	
Initial tolerance		± 500		ppb	@+25°C, V_C= 2.5V
vs. temperature in operating temperature range (steady state)			± 100 ± 50 ± 25 ± 10 ± 5	ppb ppb ppb ppb ppb	Option II = "100" Option II = "50" Option II = "25" Option II = "10" Option II = "5"
operating temperature range	-10		+60	°C	Note 2
vs. supply voltage variation			± 2	ppb	V_S ± 5%
vs. load change			± 2	ppb	
long term stability (aging) per year after 30 days operation			± 200 ± 100	ppb/year ppb/year	Option II = "100" All other Options II
Frequency adjustment range					
Electronic Frequency Control (EFC) range	± 5 ± 0.8	 ± 1		ppm ppm	Option II ="100" All other Options II
EFC voltage V_C	0.25		4.75	V	
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	%	@ V_S/2
Warm-up time @25°C			5	min	$\Delta f_{final}/f_0$ < ±0.1 ppm
Phase noise @10 MHz Option II „10"		-120 -140 -145 -150		dBc dBc dBc dBc	10 Hz 100 Hz 1000 Hz 10000 Hz
Reference voltage VREF output		3.0		V	Note 3
Supply voltage V_S	4.75 11.4	5.0 12	5.25 12.6	V V	Option I ="50" Option I="12"
Current consumption (steady state) @ +25°C			200 80	mA mA	Option I ="50" Option I="12"
Current consumption (warm-up)			500 200	mA mA	
Operable temperature range	-30		+75	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing) LxWxH (Note4)	36.1x27.2x19.4 max.			mm	IEC 60679-3 CO 08
Weight			30	gram	
Packing	Palette				

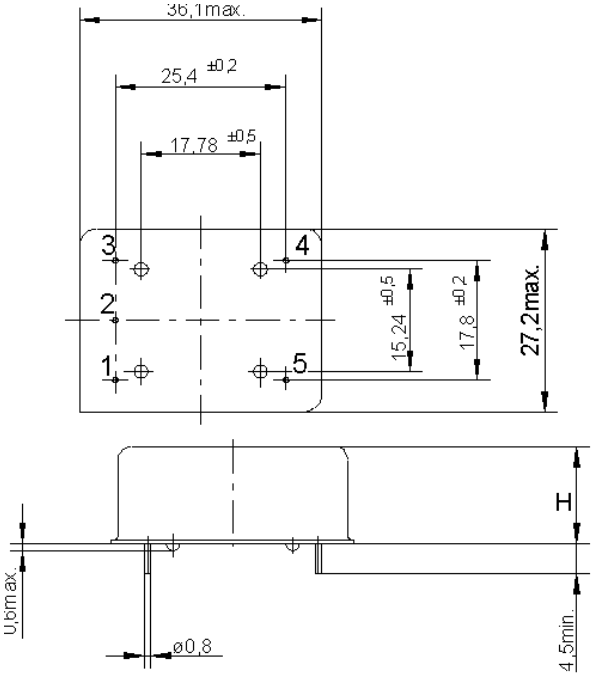
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature ranges on request
3. Other reference voltages on request
4. Lower height H available on request

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIOM40	50	100	10.000

Enclosure:



Pin connections

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

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
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
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