

Datasheet

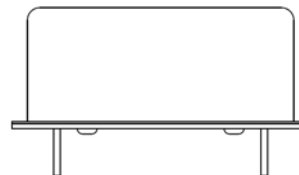
AXIOM40

OCXO HIGH STABILITY, HCMOS OUTPUT

FEATURES

- Thru hole package, size 36.1 x 27.2 x 16 mm
- High Stability till +/- 5 ppb over temperature range
- Standard frequencies : 10.000 / 16.384 / 20.000 MHz
- HCMOS Output

36.1 x 27.2 x 16 mm max.



Parameter	min.	typ.	max.	Unit	Condition	
Frequency range	5		80	MHz		
Standard frequencies	10 / 16.384 / 20.000			MHz		
Frequency stability				ppm		
Initial tolerance		± 500		ppb	@+25°C, V _c = 2.5V	
vs. operating temperature range (steady state)			± 100	ppb	Option II = "100"	
			± 50	ppb	Option II = "50"	
			± 25	ppb	Option II = "25"	
			± 10	ppb	Option II = "10"	
			± 5	ppb	Option II = "05"	
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	ppb/year	Option II = "100"	
			± 100	ppb/year	All other Options II	
Frequency adjustment range						
Electronic Frequency Control (EFC) range	± 0.8	± 1		ppm	5 MHz to 12.8 MHz	
	± 1			ppm	> 12.8 MHz	
EFC voltage V _c	0.25		4.75	V		
EFC slope (Df / DV _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	
Phase noise @10 MHz					Df _{final} /f ₀ < ±0.1 ppm	
				-120	dBc/Hz	10 Hz
				-140	dBc/Hz	100 Hz
				-145	dBc/Hz	1 kHz
				-150	dBc/Hz	10 kHz
Reference voltage VREF output (Note 3)	4.0			V	Option I = "50"	
	5.0			V	Option I = "12"	
Supply voltage V_s	4.75	5.0	5.25	V	Option I = "50"	
	11.4	12	12.6	V	Option I = "12"	
Current consumption (steady state) @ +25°C				200	mA	Option I = "50"
				100	mA	Option I = "12"
Current consumption (warm-up)				500	mA	
				250	mA	
Operable temperature range	-30		+75	°C		
Storage temperature range	-40		+85	°C		
Enclosure (see drawing) LxWxH (Note4)	36.1x27.2x16 max.			mm	IEC 60679-3 CO 08	
Weight				30	gram	
Packing	Palette					

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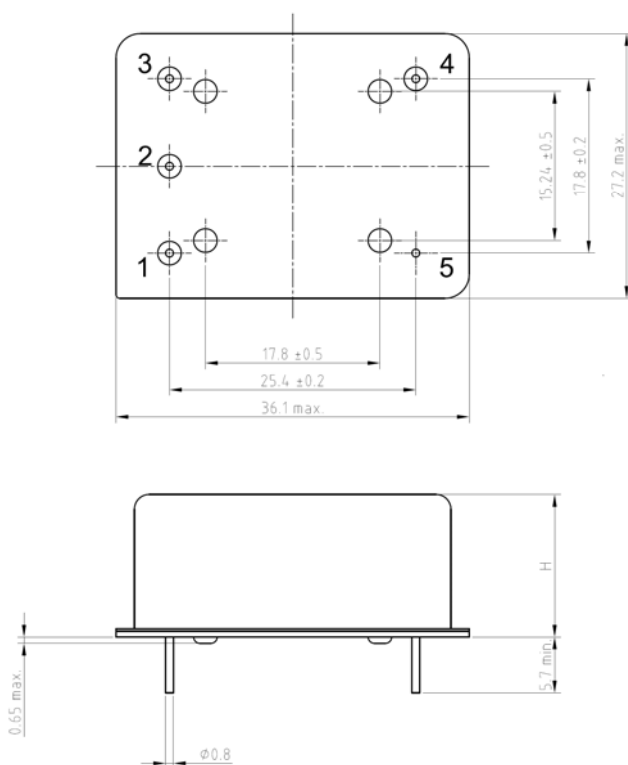
Notes:

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	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

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