

Datasheet

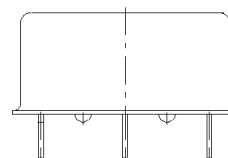
AXIOM30

HIGH STABILITY MINIATURE OCXO WITH HCMOS

FEATURES

- High stability Miniature OCXO till ± 5 ppb
- Thru-hole package : 20.5 x 20.5 x 12 mm. max.
- Standard frequencies available : 10.000 / 12.800 / 100.000 / 125.000 MHz
- Output HCMOS
- Electronic Frequency Control (EFC)

20.5 x 20.5 x 12 mm. max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		125	MHz	
Standard frequencies	10.000/12.800/100.000/125.000			MHz	
Frequency stability				ppm	
Initial tolerance @+25°C			± 500	ppb	V_C @ centre value
vs. operating temperature range (steady state)			± 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"
		± 5	ppb	Option II = "05"	
operating temperature range	-10		60	°C	Note 2
vs. supply voltage variation			± 10	ppb	
vs. load change			± 10	ppb	
Long term (aging) per day, after 30 days operation			± 10	ppb	Option II = "200", "100"
			± 2	ppb	All other Options II
long term (aging) 1 st year, after 30 days operation			± 200	ppb	Option II = "200", "100"
			± 100	ppb	All other Options II
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 0.8	± 1		ppm	10 MHz to 12.8 MHz
	± 1			ppm	> 12.8 MHz
EFC voltage V_C	0.15	1.65	3.15	V	Option I = "33"
	0.25	2.5	4.75	V	Option I = "50" and "12"
EFC slope (Df / DV _C)		positive			
EFC input impedance	100			kΩ	
RF output					
Signal waveform		HCMOS			
Load		15		pF	
Symmetry (duty cycle)	40		60	%	@ 50% of V_L to V_H
Warm-up time			3	min	$Df_{final}/f_0 < \pm 0.1$ ppm
Reference voltage VREF output		3.0		V	Option I = "33"
Note 3		5.0		V	Option I = "50" and "12"
Supply voltage V_S	3.15	3.3	3.45	V	Option I = "33"
	4.75	5.0	5.25	V	Option I = "50"
	11.4	12.0	12.6	V	Option I = "12"
Current consumption (steady state) @ +25°C			300	mA	Option I = "33"
			200	mA	Option I = "50"
			100	mA	Option I = "12"
Current consumption (warm-up)			800	mA	Option I = "33"
			500	mA	Option I = "50"
			250	mA	Option I = "12"
Operable temperature range	-20		+70	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing) L x W x H	20.5x20.5x12 max.			mm	IEC 60679-3 CO 15
Weight			10	gram	

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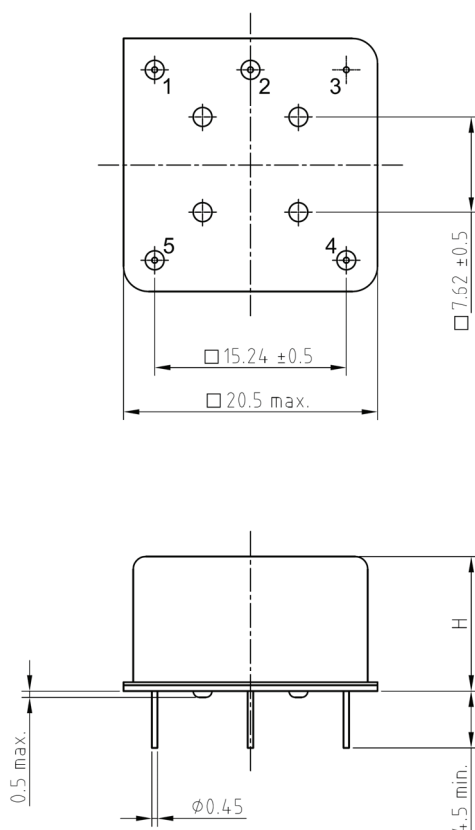
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Other operating temperature range on request
3. Other reference voltages on request
4. Not all combinations of options may be available at any frequency

Ordering Code:

Model (Specification)	Option I Supply	Option II Stability	Frequency [MHz]
AXIOM30	50	100	10.000

Enclosure drawing



Pin connections

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