

Data sheet

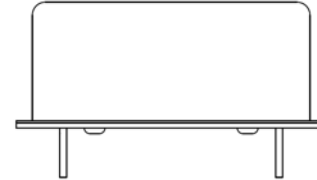
AXIOM75

OCXO WITH SINE WAVE OUTPUT, LOW PHASE NOISE

FEATURES

- Thru Hole package, size 25.8 x 25.8 x 12.7 mm
- Sine Wave Output of +7 dBm (R 50Ω)
- Low Phase Noise till -160 dBc/Hz @ 100 KHz
- Standard Frequencies: 10.0 / 12.8 / 100.0 MHz

25.8 x 25.8 x 12.7 mm max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency Range	10		125		
Standard frequencies	10.000 / 12.800 / 100.000			MHz	
Frequency stability					
Initial tolerance at delivery			± 500	ppb	@+25°C @V _C = V _{REF} /2
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"
operating temperature range	-10		+60	°C	Note 2
vs. supply voltage variation			± 10	ppb	V _S ± 5%
vs. load change			± 5	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)	± 3			ppm	Option II="200", "100"
	± 0.8	± 1		ppm	Option II="50", "25", "10"
EFC voltage V _C	0		VREF	V	
EFC slope (Df / DV _C)		positive			
EFC input impedance	100			kΩ	
RF output					
Signal waveform	Sine wave				R _L = 50 Ω
Output level	+ 7			dBm	
Harmonics			-30	dBc	
Spurious			-90	dBc	
Warm-up time			5	min	Df _{final} /f ₀ < ±0.1 ppm
Phase noise @ 10.000 MHz		-140		dBc/Hz	@ 100 Hz
		-150		dBc/Hz	@ 1 kHz
		-155		dBc/Hz	@ 10 kHz
		-160		dBc/Hz	@ 100 kHz
Reference voltage V_{REF} output (Note 3)		4.0		V	Option I = "50"
		10.0		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			250	mA	Option I = "50"
			100	mA	Option I = "12"
Current consumption (warm-up)			600	mA	Option I = "50"
			250	mA	Option I = "12"
Operable temperature range	-20		+70	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing) (LxWxH)	25.8x25.8x12.7max.			mm	
Weight				10	gram

Datasheet

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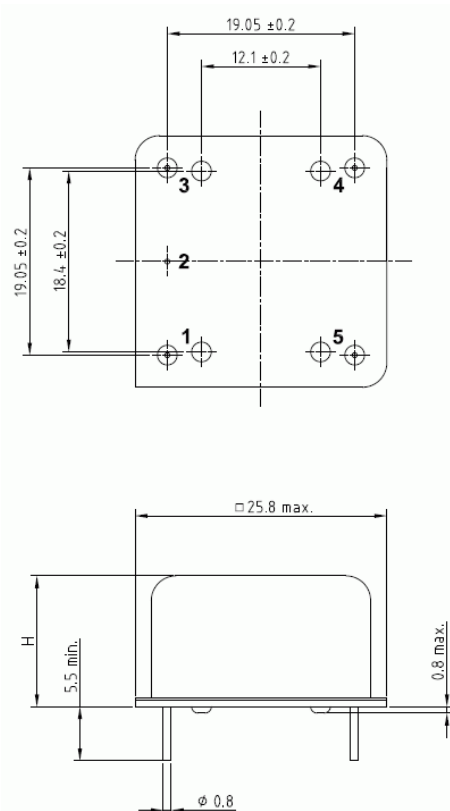
Notes:

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 voltage on request

Ordering Part Number Code:

Model (Specification)	Revision	Option I	Option II	Frequency [MHz]
AXIOM75	Rev.4.0	12	25	10.000

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground, case
3	V _c	Control Voltage (EFC)
4	VREF	Reference Voltage
5	V _s	Supply 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

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