

Specification	AXIOM20-17	Issue: 01	Date: 2007-10-17
Oscillator type : OCXO for Cospas-Sarsat Beacons			

Parameter	min.	typ.	max.	Unit	Condition
Frequency range				MHz	
Nominal frequency		60.750		MHz	
Frequency stability				ppm	
Initial tolerance		± 1	± 2	ppm	
vs. temperature					Note 3
- temperature ramp of ± 5 °C / h			± 2	ppb/min	Clause 4.2.2
- thermal shock of 30°C			± 2	ppb	Clause 4.2.3
operating temperature range	-40		+55	°C	Class 1 (Option I)
	-20		+55	°C	Class 2 (Option I)
vs. supply voltage variation			± 20	ppb	V _S ± 5%
vs. load change			± 20	ppb	
Overall aging 5 years			± 10	ppm	
Frequency adjustment range					
Electronic Frequency Control (EFC)		N.A.			
RF output					
Signal waveform		HCMOS			
Load		15		pF	
Rise & decay time			7	ns	
Symmetry	40		60	%	
Warm-up time			2	min	$\Delta f_{\text{final}}/f_0 < \pm 0.1 \text{ ppm}$
Supply voltage VS1 (Oven)	4.75	5.0	5.25	V	Note 2
Current consumption (steady state)			100	mA	@ +25°C
Current consumption during warm-up		300	400	mA	Class 1
		250	300	mA	Class 2
Supply voltage VS2 (Oscillator)	4.75	5.0	5.25	V	Note 2
Current consumption (VS2)		10	15	mA	
Operable temperature range	-45		+60	°C	
Storage temperature range	-45		+105	°C	
Enclosure (see drawing)		20.7x13.1x8.5 max.		mm	IEC 60679-3 CO 02
Weight			5	gram	
Packing		Palette or stick			
ESD Sensitivity	1500			V	HBM as in IEC 61000-4-2

Notes:

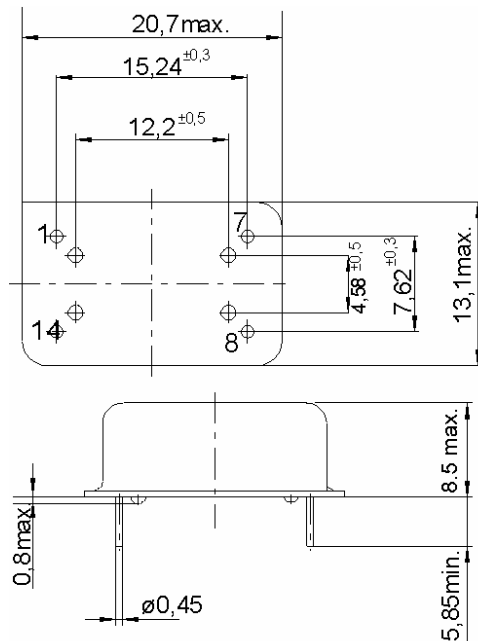
- Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
- Oven supply VS1 can be switched on and off separately, while oscillator supply VS2 is on.
Oven will not work properly without VS1 applied !
- In accordance with mentioned clauses of Cospas/Sarsat Specification C/S T.001

Ordering Code:

Model (Specification)	Option I (Class)	Frequency [MHz]
AXIOM20-17	2	60.750

Example: AXIOM20-17-2-60.750 MHz

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	VS1	Supply Voltage (Oven)
7	GND	Ground
8	RF OUT	RF Output
14	VS2	Supply Voltage (Oscillator)

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
Visual inspection, dimensions		4.3	Enclosure styles as in IEC 60679-3 or 61837, if applicable
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
Bump*	2-29	4.6.6	Test Eb, 4000 bumps per Axes, 40g, 6 ms
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
Rapid change of temperature	2-14	4.6.5	Test Na, 10 cycles at extremes of operating temperature range
Dry heat	2-2	4.6.14	Test Ba, 16 h at upper temperature indicated by climatic category
Damp heat, cyclic*	2-30	4.6.15	Test Db variant 1 severity b), 55°C/95% r.H., 6 cycles
Cold	2-1	4.6.16	Test Aa, 2 h at lower temperature indicated by climatic category
Climatic sequence*	1-7	4.6.17	Sequence of 4.6.14, 4.6.15 (1 st cycle), 4.6.16, 4.6.15 (5 cycles)
Damp heat, steady state*	2-3	4.6.18	Test Ca, 56 days
Endurance tests			
- ageing		4.7.1	30 days @ 85°C, OCXO @25°C
- extended aging		4.7.2	1000h, 2000h, 8000h @85°C