

OCXO DIL14 AXIOM 20



www.matel-piezo.fr

Specification	AXIOM20	Issue: 04	Date: 2009-09-22
----------------------	----------------	-----------	------------------

Oscillator type : OCXO in DIL14 package, HCMOS Output

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		80	MHz	
Standard frequencies	10 / 12.8 / 16.384 / 20.000			MHz	
Frequency stability				ppm	
Initial tolerance		± 500		ppb	@+25°C, V _C = 2.5V
vs. temperature (steady state)			± 50	ppb	Option II = "50"
			± 100	ppb	Option II = "100"
			± 200	ppb	Option II = "200"
			± 300	ppb	Option II = "300"
			± 500	ppb	Option II = "500"
operating temperature range	-10		+60	°C	Note 2
vs. supply voltage variation			± 10	ppb	
vs. load change			± 20	ppb	
long term (aging) 1 st year (Note 3)			± 0.5	ppm	@ +40°C, after 30 days
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 2		± 5	ppm	
EFC voltage V _C	0.15	1.65	3.15	V	Option I = "33"
	0.25	2.5	4.75	V	Option I = "50"
EFC slope (Δf / ΔV _C)	positive				
EFC linearity				%	
EFC input impedance	100			kΩ	
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			10	ns	
Symmetry	40		60	%	
Warm-up time			2	min	Δf _{final} /f ₀ < ±0.1 ppm
Supply voltage V _S	3.13	3.3	3.47	V	Option I = "33"
	4.75	5.0	5.25	V	Option I = "50"
Current consumption (steady state)			300	mA	Option I = "33"
@ +25°C			200	mA	Option I = "50"
Current consumption (warm-up)			800	mA	Option I = "33"
			500	mA	Option I = "50"
Enable/disable function					
Operable temperature range	-30		+75	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing)	20.7x13.1x8.5 max.			mm	IEC 60679-3 CO 02
Weight			5	gram	
Packing	Palette or tube				
ESD Sensitivity	1500			V	HBM, IEC 61000-4-2
Handling and Testing	In accordance with AXAN-011				www.axtal.com
Processing	In accordance with AXAN-012				www.axtal.com

Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Operating temperature range -20°C to +70°C on request
3. Aging of ± 0.2 ppm / 1st year on request

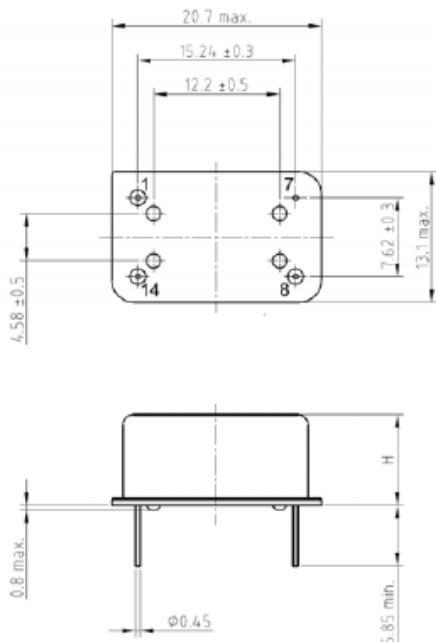
Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIOM20	50	100	10.000

OCXO DIL14 AXIOM 20



Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	V _C	Voltage Control (EFC)
7	GND	Ground
8	RF OUT	RF Output
14	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 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
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