AXTAL ADVANCED XTAL PRODUCTS

Specification	AXIOM75ULN	Rev.: 01	Date: 2012-01-28

Oscillator type : Ultra-Low Phase Noise OCXO

Parameter	min.	typ.	max.	Unit	Condition
Frequency Range	80		125		
Standard frequencies	100.000 /120.000			MHz	
Frequency stability					
Initial tolerance at delivery			± 500	ppb	@+25°C @V_C = VREF/2
vs. temperature in operating temperature range			± 200 ± 100 ± 50 ± 25 ± 10	ppb ppb ppb ppb ppb	Option II = "200" Option II = "100" Option II = "50" Option II = "25" 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 ± 1	± 10 ± 2	ppb ppb	Option II="200", "100" Option II="50","25","10"
long term (aging) 1st year, after 30 days operation			± 200 ± 100	ppb ppb	Option II="200", "100" Option II="50","25","10"
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 1	± 2		ppm	
EFC voltage V_C	0		VREF	V	
EFC slope ($\Delta f / \Delta V_C$)	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	$\Delta f_{final}/f_0$ < ±0.1 ppm
Phase noise @ 10.000 MHz	See table below				Option I
Reference voltage VREF output		10.0		V	
Supply voltage V_S	11.4	12	12.6	V	Note 3
Current consumption (steady state)			100	mA	@ +25°C
Current consumption (warm-up)			250	mA	
Operable temperature range	-20		+70	°C	
Storage temperature range	-40		+85	°C	
Enclosure (see drawing) (LxWxH)	25.8x25.8x12.7max.			mm	IEC 60679-3 CO 43
Weight			10	gram	
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. Other operating temperature range on request
3. Other supply voltage on request

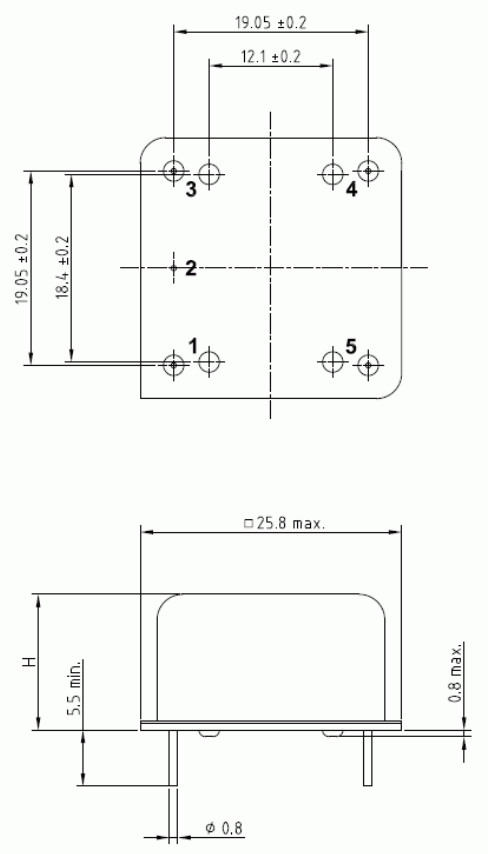
Phase Noise options I:

Offset	100 MHz					120 MHz					Unit
	A	B	C	D	E	A	B	C	D	E	
10 Hz	-90	-95	-97	-100	-105	-85	-90	-95	-97	-100	dBc/Hz
100 Hz	-125	-130	-132	-135	-137	-118	-122	-125	-127	-130	dBc/Hz
1 kHz	-155	-158	-160	-162	-164	-148	-150	-153	-155	-157	dBc/Hz
10 kHz	-165	-168	-170	-172	-174	-160	-165	-168	-170	-172	dBc/Hz
≥100 kHz	-175	-175	-175	-175	-175	-175	-175	-175	-175	-175	dBc/Hz

Ordering Code:

Model (Specification)	Phase Noise Option I	Stability Option II	Frequency [MHz]
AXIOM75ULN	A	25	100.000

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 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