AXTAL ADVANCED XTAL PRODUCTS

Specification	AXIS10	Issue: 03	Date: 2005-06-10

Oscillator type : SMD VCXO in CO 26 package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	1.544		100	MHz	
Standard frequencies	16.384/19.440/38.880/52.000			MHz	
Frequency stability	-20		20	ppm	See Note 1
Initial tolerance		±5		ppm	
vs. temperature in operating temperature range (steady state)				ppm	
vs. supply voltage variation	-3		3	ppm	V_S ±5%
vs. load change	-1		1	ppm	Load ±5%
long term (aging) per year			±1	ppm/year	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 100			ppm	
EFC voltage V_C	0.5 0.3		4.5 3.0	V V	Option I = ”50” Option I = “33”
EFC slope ($\Delta f / \Delta V_C$)	positive				
EFC linearity		10		%	
EFC input impedance	100			kΩ	
RF output					
Signal waveform	HCMOS				
Output signal HIGH V_{OH}	2.4 V_S-0.5V			V V	TTL load (fan-out 2) HCMOS load 15 pF
Output signal LOW V_{OL}			0.4 0.5	V V	TTL load (fan-out 2) HCMOS load 15 pF
Rise & decay time			10	ns	according to logic family
Symmetry (duty cycle)	40		60	%	@ $V_S/2$
Start-up time			10	ms	
Supply voltage V_S	4.75 3.13	5.0 3.3	5.25 3.47	V V	Option I = “50” Option I = “33”
Current consumption (steady state)			45 85	mA mA	Option I = “50” Option I = “33”
Operating temperature range	-20 -40		+70 +85	°C °C	Option II = “2070” Option II = “4085”
Operable temperature range	-45		+90	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing) (LxWxH)	14.4 x 9.5 x 5.5 max			mm	IEC 61837 CO 27
Weight			3	gram	
Packing	Tape & reel				IEC 60286-3
ESD Sensitivity	1500			V	HBM as in IEC 61000-4-2

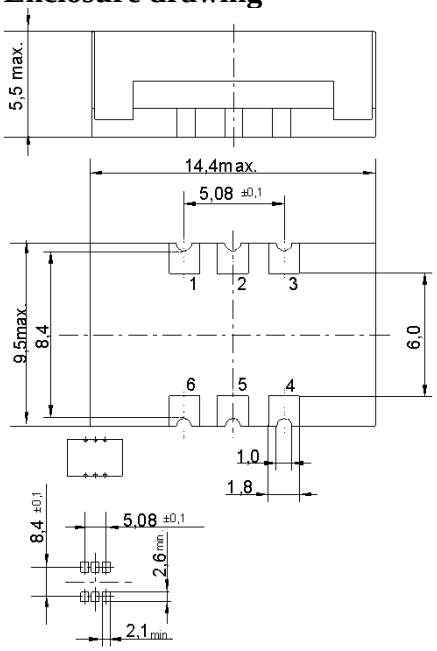
Notes:

1. Frequency stability = initial tolerance + stability vs. temperature
2. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXIS10	33	2070	52.000

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	VC	Control Voltage (EFC)
2*	N.C.	No Connection
3	GND	Ground
4	RF OUT	RF Output
5*	N.C.	No Connection
6	Vs	Supply Voltage

***** Note: Pins 2 and 5 may not be present

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 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
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 (1st 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 - extended aging		4.7.1 4.7.2	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C