AXTAL ADVANCED XTAL PRODUCTS

Specification	AXE10-14	Issue: 01	Date: 2004-03-24

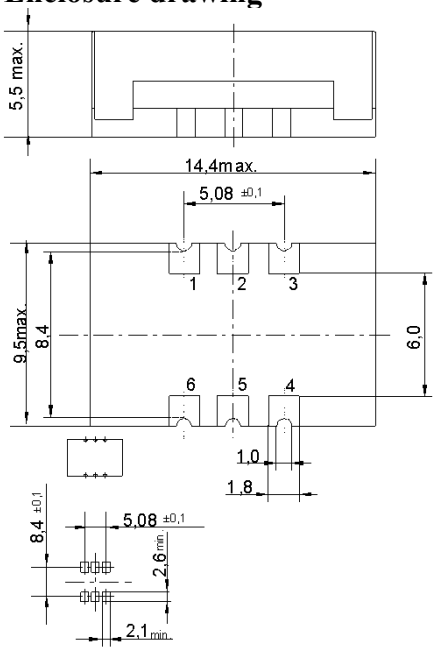
Oscillator type : PXO for WLAN Test Equipment

Parameter	min.	typ.	max.	Unit	Condition
Frequency range				MHz	
Standard frequencies		22.000 / 40.000		MHz	
Frequency stability				ppm	
Initial tolerance			±2	ppm	
vs. temperature in operating frequency range (steady state)			±5	ppm	0°~+50°C
vs. supply voltage variation			±0.2	ppm	
vs. load change			±0.1	ppm	
long term (aging) 1st year			±1	ppm	@ 40°C
Frequency adjustment range					
Mechanical (internal trimmer)				ppm	N.A.
Electronic Frequency Control (EFC) range				ppm	N.A.
EFC voltage V_C				V	N.A.
EFC slope ($\Delta f / \Delta V_C$)					
EFC linearity				%	
EFC input impedance	10			kΩ	
Absolute pull range (APR) over 10 years, see Note 2				ppm ppm	
RF output					
Signal waveform		HCMOS			
Load		15		pF	
Rise & decay time			5	ns	
Symmetry (duty cycle)	40		60	%	@ $V_S/2$
Start-up time			4	ms	
Phase noise @ 63 MHz [100 MHz]		-95 -125 -135 -140 -145		dBc dBc dBc dBc dBc	10 Hz 100 Hz 1 kHz 10 kHz 100 kHz
Supply voltage V_S	2.85	3.0	3.15	V	
Current consumption (steady state)			30	mA	@ +25°C
Enable/disable function					
Operable temperature range	-45		+90	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing)		14.4x9.5x6 max		mm	IEC 60679-3 or 61837
Weight			3	gram	
Packing		Tape & reel			IEC 60286-3
ESD Sensitivity	1500			V	HBM as in IEC 61000-4-2

Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	N.C.	No Connection
2	N.C.	No Connection
3	GND	Ground
4	RF OUT	RF Output
5	N.C.	No Connection
6	Vs	Supply Voltage

Environmental conditions

Test	IEC 60068 Part ...	IEC 61178-1 clause ...	Test conditions
Visual inspection, dimensions		4.5 4.6	Enclosure styles as in IEC 60122-3, if applicable
Sealing tests	2-17	4.8.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20	4.8.3	Test Ta (235 ± 5)°C Method 1 Test Tb Method 1A, 5s
Shock	2-27	4.8.8	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Bump	2-29	4.8.6	Test Eb, 4000 bumps per Axes, 40g, 6 ms
Free fall	2-32	4.8.9	Test Ed procedure 1, 2 drops from 1m height
Vibration, sinusoidal	2-6	4.8.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Rapid change of temperature	2-14	4.8.5	Test Na, 10 cycles at extremes of operating temperature range
Dry heat	2-2	4.8.11	Test Ba, 16 h at upper temperature indicated by climatic category
Damp heat, cyclic	2-30	4.8.12	Test Db variant 1 severity b), 55°C/95% r.H., 6 cycles
Cold	2-1	4.8.13	Test Aa, 2 h at lower temperature indicated by climatic category
Climatic sequence	1-7	4.8.14	Sequence of 4.8.11, 4.8.12 (1st cycle), 4.8.13, 4.8.12 (5 cycles)
Damp heat, steady state	2-3	4.8.15	Test Ca, 56 days
Endurance tests - ageing - extended aging		 4.9.1 4.9.2	 30 days @ 85°C 1000h, 2000h, 8000h @85°C