

Specification	AXLE10	Issue: 02	Date: 2005-05-22
Oscillator type : TCXO			

Parameter	min.	typ.	max.	Unit	Condition	
Frequency range	1.25		25	MHz		
Standard frequencies	12.800 / 19.44			MHz		
Frequency stability				ppm		
Initial tolerance			± 1	ppm	@+25°C	
vs. temperature in operating temperature range (steady state)	Frequency stability				Temperature	Option I
	-0.5		0.5	ppm	- 0°C ~ +50°C	"05"
	-1.5		1.5	ppm	-20°C ~ +70°C	"15"
	-2.5		2.5	ppm	-30°C ~ +75°C	"25"
vs. supply voltage variation			± 0.3	ppm	V _S ± 5 %	
vs. load change			± 0.1	ppm	R _L ± 10 %	
long term (aging) per year			± 1	ppm	@ +40°C	
Frequency adjustment range						
Electronic Frequency Control (EFC)	± 5		± 15	ppm		
EFC voltage V _C	0.5		4.5	V	Option II = "50"	
	0.3		3.0	V	Option II = "33"	
EFC slope (Δf / ΔV _C)	positive					
EFC linearity				%		
EFC input impedance	10			kΩ		
RF output						
Signal waveform	HCMOS					
Load	15			pF		
Rise & decay time			5	ns		
Symmetry (duty cycle)	45		55	%	@ V _S /2	
Start-up time			10	ms	@ V _{S nom} - 5%	
Supply voltage V_S	4.75	5.0	5.25	V	Option II = "50"	
	3.13	3.3	3.47	V	Option II = "33"	
Current consumption (steady state @ +25°C)			10	mA	Option II = "50"	
			20	mA	Option II = "33"	
Enable/disable function	Pin 2 = HIGH or OPEN: Output Enable Pin 2 = LOW: Output High Z					
Operable temperature range	-40		+85	°C		
Storage temperature range	-40		+85	°C		
Enclosure (see drawing)	15.1x9.5x6.0 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	

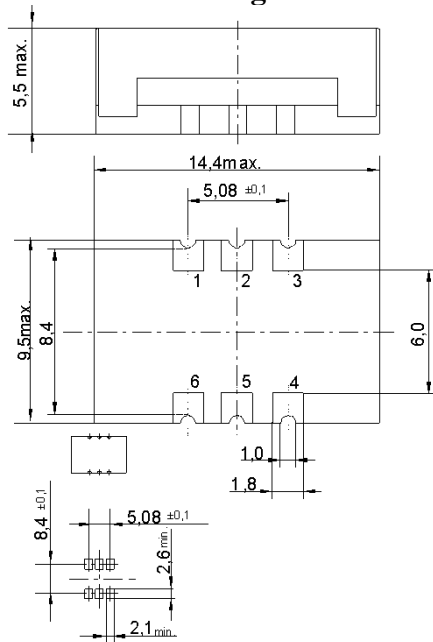
Notes:

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

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXLE10	25	33	12.800

Enclosure drawing



Pin connections

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

Note: Length max 15.1 mm, Height max. 6.0 mm

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 (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