

Specification	AXLE40	Issue: 02	Date: 2005-07-15
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Oscillator type : TCXO

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	2		150	MHz	
Standard frequencies	10 / 16.384			MHz	
Frequency stability				ppm	
Initial tolerance			± 1	ppm	@+25°C
vs. temperature in operating temperature range (steady state)	-2.5		2.5	ppm	Other stabilities on request
Operating temperature range	-30		85	°C	
vs. supply voltage variation			± 0.3	ppm	V _s ± 5%
vs. load change			± 0.3	ppm	
long term (aging) per year			± 1	ppm	@ +25°C
Frequency adjustment range					
Mechanical (internal trimmer)	± 5			ppm	Option I = "T"
Electronic Frequency Control (EFC)	± 5			ppm	Option I = "V"
EFC voltage V _C (Option I = "V")	0.5 0.5		4.5 2.5	V V	Option II = "50" Option II = "33"
EFC slope (Δf / ΔV _C)	positive				Option I = "V"
EFC input impedance	10			kΩ	Option I = "V"
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			10	ns	
Symmetry (duty cycle)	45		55	%	@ V _S /2
Start-up time			10	ms	
Supply voltage V_s	3.15 4.75	3.3 5.0	3.45 5.25	V V	Option II = "50" Option II = "33"
Current consumption (steady state)			25 40	mA mA	2 MHz ~ 27.0 MHz 27+ MHz ~ 150 MHz
Operable temperature range	-40		+85	°C	
Storage temperature range	-45		+90	°C	
Enclosure (see drawing)	20.7x13.1x5.5 max			mm	IEC 60679-3 CO 02
Weight			5	gram	
Packing	Stick				
ESD Sensitivity	1500			V	HBM as IEC 61000-4-2

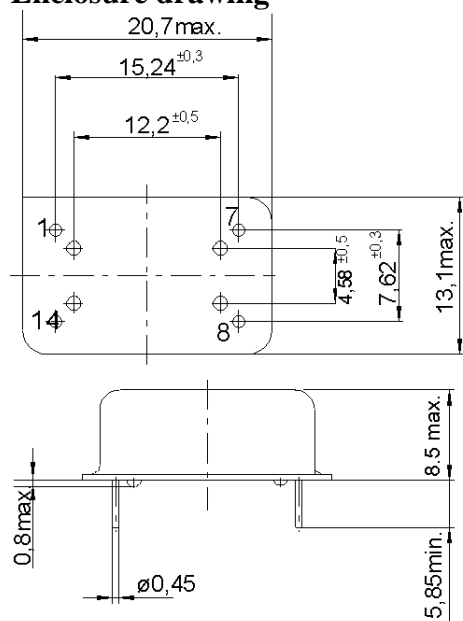
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Overall frequency stability = initial tolerance + temp.stability + supply & load change + aging

Ordering Code:

Model (Specification)	Option I	Option II	Frequency [MHz]
AXLE40	V	50	16.384

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	N.C. V _C	No Connection (Option "T") Control Voltage (Option "V")
7	GND	Ground
8	RF OUT	RF Output
14	V _S	Supply Voltage

Option "T":

Trimmer hole on top side (above pin 1)

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