

<b>Specification</b>	<b>AXLE10S</b>	Issue: 04	Date: 2009-03-05
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**Oscillator type :** TCXO with Stratum III stability incl. holdover

Parameter	min.	typ.	max.	Unit	Condition
<b>Frequency range</b>	10		40	MHz	
<b>Standard frequencies</b>	12.800 / 16.384 / 19.440 / 20.000 / 38.880			MHz	
<b>Frequency stability</b>					
Initial tolerance			± 0.5	ppm	@+25°C
vs. temperature in operating temperature range ref. to 25°C	Frequency stability				Temperature
			± 0.28	ppm	-20°~+70°C
			± 0.28	ppm	-40°~+85°C
vs. supply voltage variation			± 0.1	ppm	V <sub>S</sub> ± 5 %
vs. load change			± 0.1	ppm	R <sub>L</sub> ± 10 %
24 hours drift			± 0.04	ppm	GR-1244-CORE
24 hours holdover in operating temperature range and V <sub>S</sub> ± 5 %			± 0.37	ppm	GR-1244-CORE
long term (aging) 1 <sup>st</sup> year			± 0.5	ppm	@ +40°C
long term (aging) over 10 years			± 2.5	ppm	@ +40°C
Long term overall stability <sup>2</sup> 15 years			± 4.6	ppm	See Note 2
<b>Frequency adjustment range</b>					
Electronic Frequency Control (EFC)	N.A.			ppm	N.A.
<b>RF output</b>					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			5	ns	
Symmetry (duty cycle)	45		55	%	@ V <sub>S</sub> /2
<b>Phase noise (12.8 MHz)</b>			-90	dBc/Hz	@ 10 Hz
			-115	dBc/Hz	@ 100 Hz
			-135	dBc/Hz	@ 1 kHz
			-150	dBc/Hz	@ 10 kHz ~ 100 kHz
<b>Supply voltage V<sub>S</sub></b>	3.13	3.3	3.47	V	
<b>Current consumption</b> (steady state)			4	mA	
<b>Enable/disable function</b>	Pin 2 = HIGH or OPEN: Output Enable Pin 2 = LOW: Output High Z				
<b>Operating temperature range</b>	-20		+70	°C	Option I = "2070"
	-40		+85	°C	Option I = "4085"
<b>Operable temperature range</b>	-45		+90	°C	
<b>Storage temperature range</b>	-55		+125	°C	
<b>Enclosure (see drawing) L x W x H</b>	15.1x9.5x6.0 max			mm	IEC 61837 CO 27
<b>Weight</b>			3	gram	
<b>Packing</b>	Tape & reel				IEC 60286-3
<b>ESD Sensitivity</b>	1500			V	HBM as in IEC 61000-4-2

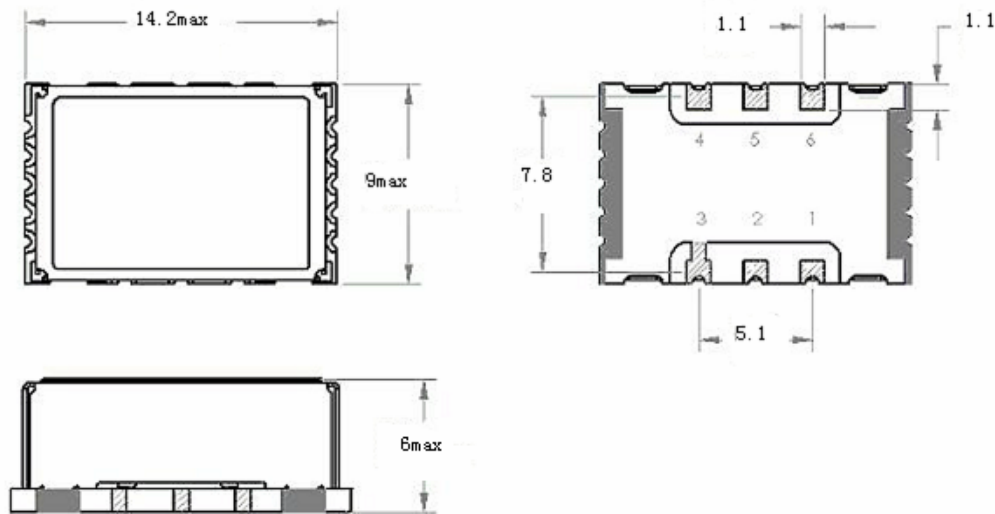
**Notes:**

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

**Ordering Code:**

Model (Specification)	Option I stability	Frequency [MHz]
AXLE10S	2070	12.800

## Enclosure drawing



## Pin connections

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

## Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 clause ...	Test conditions
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