

Specification	AXE95	Rev.: 1	Date: 2019-07-03
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Oscillator type: SPXO with sine wave output in connectorized package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		165	MHz	
Frequency stability					
Initial tolerance			±5	ppm	
vs. operating temperature range	±5 to ±20 See tables 1 & 2			ppm	Option 2 & 3
vs. supply voltage variation			±0.5	ppm	V _s ±5%
vs. load change			±0.5	ppm	R _L ±10%
Long term (aging) 1 st year		±0.5	±1.0	ppm	@ +40°C
Frequency adjustment range					
Electronic Frequency Control (EFC)		N.A.		ppm	On request
RF output					
Signal waveform	Sine Wave				
Load	50			Ω	±10%
Output level	+6	+9		dBm	
Harmonics			-30	dBc	
Spurious			-90	dBc	
Phase noise (Note 2)	Consult factory				
Supply voltage V_s	3.15	3.3	3.45	V	Option 1 = „33“
	4.75	5.0	5.25	V	Option 1 = „50“
	11.4	12.0	12.6	V	Option 1 = „12“
Current consumption (steady state)			50	mA	
Enclosure (see drawing) (LxWxH)	54x40x19			mm	h = 2.0 mm
Weight			60	g	
Packing	Palette				

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Very low phase noise models available. Please consult factory.

Absolute Maximum Ratings

Parameter	min.	max.	Unit	Condition
Supply Voltage V _s	-0.5	V _s + 10%	V	V _s to GND
Storage Temperature	-55	+105	°C	

Frequency stability vs. temperature

Option 2	Stability [ppm]
5	±5
10	±10
15	±15
20	±20

Table 1

Lower Temperature		Upper Temperature	
Option 3	T [°C]	Option 3	T [°C]
0	0	A	+50
1	-10	B	+60
2	-20	C	+70
3	-30	D	+75
4	-40	E	+80
		F	+85

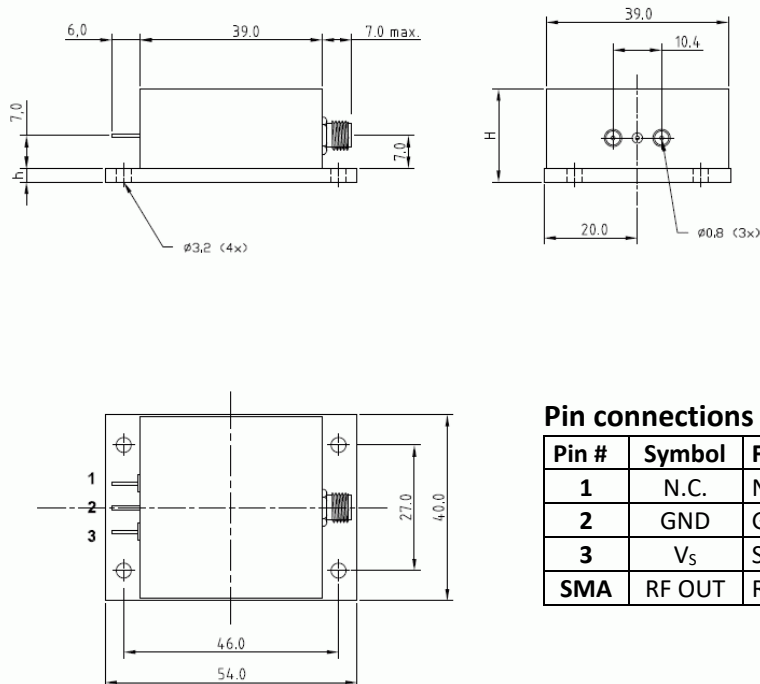
Table 2

Ordering Code

Model	Option 1 [Supply Voltage]	Option 2 [Stability]	Option 3 [Temperature range]	Revision	Frequency [MHz]
AXE95	33, 50 or 12	Table 1	Table 2	Rev.1	100.000

Example: AXE95-50-5-1B_Rev.1 – 100.000 MHz

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	N.C.	No Connection
2	GND	Ground
3	V _S	Supply Voltage
SMA	RF OUT	RF Output

Handling and Testing

Parameter	Procedure		Source
Handling and Testing	Application Note AXAN-011		www.axtal.com
Processing	Application Note AXAN-012		www.axtal.com
Parameter	Procedure		Condition
Electrostatic discharge (ESD)			
THD devices	IEC60749-26	HBM	2000 V
SMD devices	IEC60749-27	MM	200 V
Washable	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
RoHS compliant	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810F Method	MIL-PRF-55310D Clause	Test conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability	2-20	5.6.3	208H		3.6.52	Test Ta Method 1
Resistance to soldering heat	2-58		210F		3.6.48	Test Td ₁ Method 2 Test Td ₂ Method 2
Shock	2-27	5.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal	2-6	5.6.7.1	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Vibration, random	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests - ageing - extended aging		5.7.1 5.7.2	108A		4.8.35	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

Other environmental conditions on request

Data sheet is for information purposes only and may be subject to modifications or may be discontinued without notice.

Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
1	D0	03.07.2019	First issue	HH	HH