

<b>Specification</b>	<b>AXE15LN</b>	Rev.: 1	Date: 2014-04-04
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**Oscillator type: Low Phase Noise SMD SPXO with Sine Wave Output**

Parameter	min.	typ.	max.	Unit	Condition
<b>Frequency range</b>	10		165	MHz	
<b>Frequency stability</b>				ppm	
Initial tolerance			±5	ppm	
vs. operating temperature range			±5	ppm	
vs. supply voltage variation			±0.5	ppm	$V_S \pm 5\%$
vs. load change			±0.5	ppm	$R_L \pm 10\%$
Long term (aging) 1 <sup>st</sup> year			±1	ppm	@ 40°C
<b>Frequency adjustment range</b>					
Electronic Frequency Control (EFC)		N.A.		ppm	on request
<b>RF output</b>					
Signal waveform	Sine Wave				
Load	50			Ω	± 10%
Output level	0	+5		dBm	
Harmonics			-30	dBc	
Start-up time			4	ms	
Phase noise @ 100 MHz (Note 3)		-95 -125 -150 -155 -160		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	10 Hz 100 Hz 1 kHz 10 kHz ≥100 kHz
<b>Supply voltage <math>V_S</math></b>	3.15 4.75	3.3 5.0	3.45 5.25	V V	Option = „33“ Option = „50“
<b>Current consumption (steady state)</b>			30	mA	@ +25°C
<b>Operating temperature range</b>	0		+50	°C	(Note 2)
<b>Enclosure (see drawing)</b>	14.4x9.5x6.0 max.			mm	IEC 61837 CO 27
<b>Weight</b>			2	g	
<b>Packing</b>	Tape & Reel				IEC 60286-3

**Notes:**

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Other temperature range and stabilities on request
3. Phase noise at other frequencies on request

**Absolute Maximum Ratings**

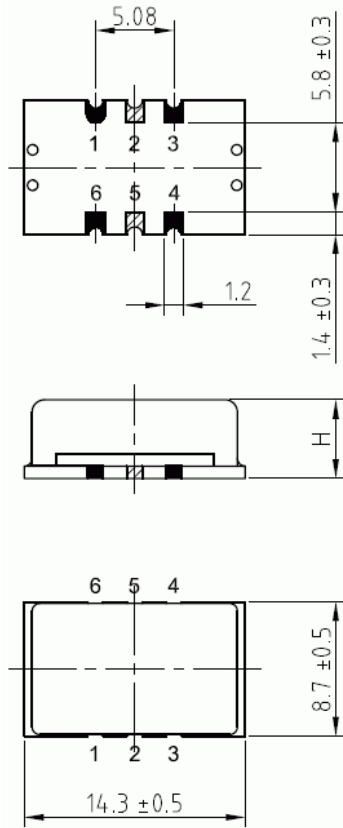
Parameter	min.	max.	Unit	Condition
Supply Voltage $V_S$	-0.5	$V_S + 10\%$	V	$V_S$ to GND
Storage Temperature	-55	+125	°C	

**Ordering Code**

Model	Option [Supply Voltage]	Revision	Frequency [MHz]
AXE15LN	50	Rev.1	100.000

**Example: AXE15LN-50\_Rev.1 – 100.000 MHz**

**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

**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 type="checkbox"/> Yes <input checked="" 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 Resistance to soldering heat	2-20 2-58	5.6.3	208H 210F		3.6.52 3.6.48	Test Ta Method 1 Test Td <sub>1</sub> Method 2 Test Td <sub>2</sub> 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	04.04.2014	First issue	HH	HH