

Specification	AXE10L/LE	Rev.: 2	Date: 2014-04-04
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Oscillator type: SMD SPXO with LVDS Output

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	1.000		800	MHz	
Frequency stability (Note 2)			±25	ppm	Option 2 = "25-0C"
			±50	ppm	Option 2 = "50-4F"
Initial tolerance				ppm	Included in
vs. operating temperature range				ppm	"frequency stability"
vs. supply voltage variation			±3	ppm	V _S ±5%
vs. load change			±1	ppm	Load ±5%
Long term (aging) per year			±3	ppm	@ +25°C
Frequency adjustment range					
Electronic Frequency Control (EFC) range		N.A.		ppm	
RF output					
Signal waveform	LVDS				
Load	50			Ω	
Rise & decay time			1	ns	20% ~ 80% of amplitude
Symmetry (duty cycle)	45		55	%	@ V _S /2
Start-up time			10	ms	
Jitter (RMS)			1	ps	10 kHz ~ 20 MHz
Supply voltage V_S	3.15	3.3	3.45	V	Option 1 = "33"
	4.75	5.0	5.75	V	Option 1 = "50"
Current consumption (steady state)			120	mA	@ +25°C (Note 3)
Enable/Disable function (Pin 1)	Not applicable				Model = "AXE10L"
	V _L < 0.8 V: Enable				Model = "AXE10LE"
	V _H > 2.0 V or OPEN: Disable				
Operating temperature range	0		+70	°C	Option 2 = "25-0C"
	-40		+85	°C	Option 2 = "50-4F"
Enclosure (see drawing) (LxWxH)	14.8x9.8x5.5 max.			mm	IEC 61837 CO 27
Weight			2	g	
Packing	Tape & Reel				IEC 60286-3

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Frequency stability = initial tolerance + stability vs. temperature
3. Maximum current consumption depends on frequency and load
4. All combinations of options might not be available. Please consult factory

Absolute Maximum Ratings

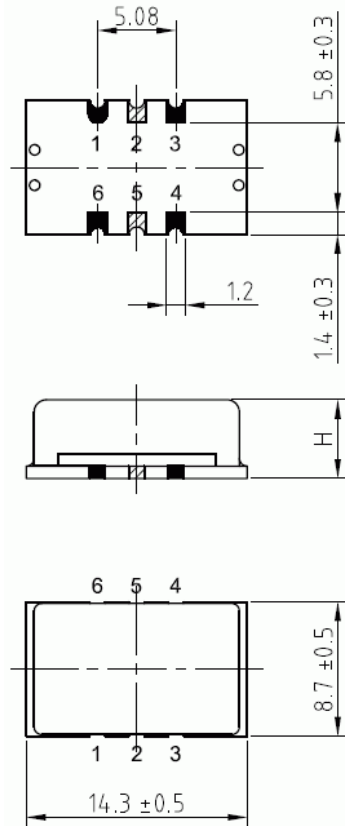
Parameter	min.	max.	Unit	Condition
Supply Voltage V _S	-0.5	V _S + 10%	V	V _S to GND
Storage Temperature	-55	+105	°C	

Ordering Code

Model	Option 1 [Supply Voltage]	Option 2 [Temperature range]	Revision	Frequency [MHz]
AXE10L AXE10LE	50	25-0C	Rev.2	155.520

Example: AXE10L-50-25-0C_Rev.2 – 155.520 MHz

Enclosure drawing



Pin connections

AXE10L:

Pin #	Symbol	Function
1	N.C.	No Connection
2	N.C.	No Connection
3	GND	Ground
4	RF OUT1	RF Output
5	RF OUT2	Complementary RF Out
6	Vs	Supply Voltage

AXE10LE:

Pin #	Symbol	Function
1	E/D	Enable/Disable
2	N.C.	No Connection
3	GND	Ground
4	RF OUT1	RF Output
5	RF OUT2	Complementary RF Out
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 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
2	D1	01.10.2012	Editorial changes	BN	BN
2	D2	04.04.2014	Environmental conditions updated, editorial changes	HH	HH