

Specification	AXE7050M	Rev.: 1	Date: 2015-11-23
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**Oscillator type: Crystal Oscillator (SPXO) in 7x5 mm package
for wide temperature range -55°C to +125°C**

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	7		50	MHz	
Standard frequencies	16.000 / 25.1750			MHz	
Frequency stability					
Overall stability (Note 2)	±10 to ±100 See table 1			ppm	Option 2
vs. operating temperature range	See table 2				Option 3
Long term (aging) per year			±3	ppm	@ 40°C
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	
Output Enable/Disable (OE) Input	Open or HIGH: RF output LOW: Tri-state output				Option 4
Supply voltage V_s	3.15 4.75	3.3 5.0	3.45 5.25	V V	Option 1 = "33" Option 1 = "50"
Current consumption (steady state) (Note 3)			45 25	mA mA	Option 1 = "33" Option 1 = "50"
Enclosure (see drawing) (LxWxH)	7.2 x 5.2 x 1.5 max.			mm	IEC 61837-2, DCC-4/08
Marking	AXX7050M+Options Frequency xxAXMyy				ww=week, yy=year
Weight			5	g	
Packing	Tape & Reel				IEC 60286-3
Screening Option (MIL-PRF-55310)	Level B or C				On request

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Overall stability includes initial tolerance, pushing, pulling and aging
3. Depending on frequency and supply voltage

Absolute Maximum Ratings

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

Overall stability and operating temperature range

Option 2	Stability [ppm]
10	±10
15	±15
25	±25
50	±50
100	±100

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
5	-55	F	+85
		G	+105
		H	+125

Table 2

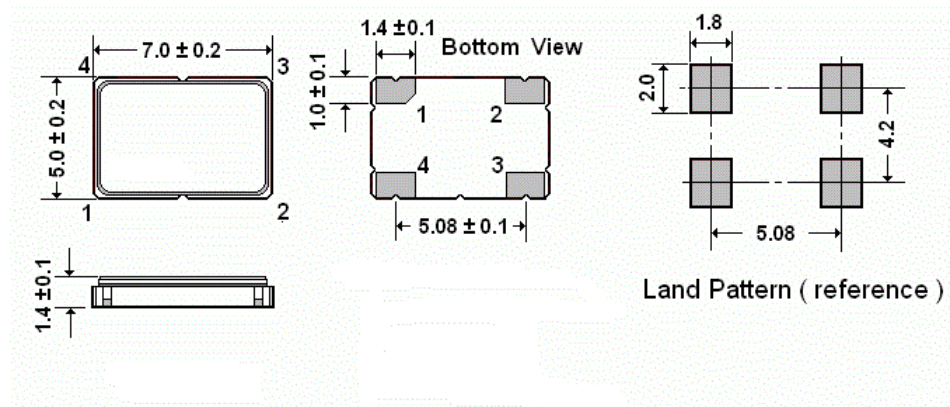
Note: Not all combinations of stability and temperature range are available. Please consult factory

Ordering Code

Model	Option 1 [Supply Voltage]	Option 2 [Stability]	Option 3 [Temperature range]	Revision	Frequency [MHz]
AXE7050M	33 or 50	Table 1	Table 2	Rev.1	16.000

Example: AXE7050M-50-25-2C_Rev.1 – 10.000 MHz

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	OE	Output Enable/Disable
2	GND	Ground
3	RF OUT	RF Output
4	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 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 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
1	D0	23.11.2015	First issue AXE7050M Rev.1	BN	BN