

Specification	AXE7050P	Rev.: 3	Date: 2014-04-04
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Oscillator type: Programmable Crystal Oscillator in 7x5 mm package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	1		133	MHz	$V_S = 5\text{ V}$
	1		100	MHz	$V_S = 3.3\text{ V}$
	1		66	MHz	$V_S = 2.7\text{ V}$
Programmable frequencies	Any discrete frequency				At delivery
Frequency stability					
Overall stability			± 100	ppm	Option 2 = "100"
			± 50	ppm	Option 2 = "50"
			± 25	ppm	Option 2 = "25"
Long term (aging) per year			± 5	ppm	@ 40°C
RF output					
Signal waveform	HCMOS				
Load	15			pF	
Rise & decay time			5	ns	
Symmetry (duty cycle)	40		60	%	@ $V_S/2$
Start-up time			10	ms	
Jitter (peak-to-peak)		65	100	ps	Freq $\leq 33\text{ MHz}$
		65	80	ps	Freq $> 33\text{ MHz}$ (5V)
Output Enable/Disable (OE) Input	Open or HIGH: RF output LOW: Tri-state output				
Supply voltage V_S	2.50	2.7	3.00	V	Option III = "27"
	3.15	3.3	3.45	V	Option III = "33"
	4.75	5.0	5.25	V	Option III = "50"
Current consumption (steady state)			20	mA	Option III = "27"
			25	mA	Option III = "33"
			45	mA	Option III = "50"
Operating temperature range	0		+70	°C	Option 3 = "0C"
	-20		+70	°C	Option 3 = "2C"
	-40		+85	°C	Option 3 = "4C"
Enclosure (see drawing)	7.15x5.15x1.8 max.			mm	IEC 61837-2
Weight			2	g	
Packing	Bulk or Tape & Reel				IEC 60286-3

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated

Absolute Maximum Ratings

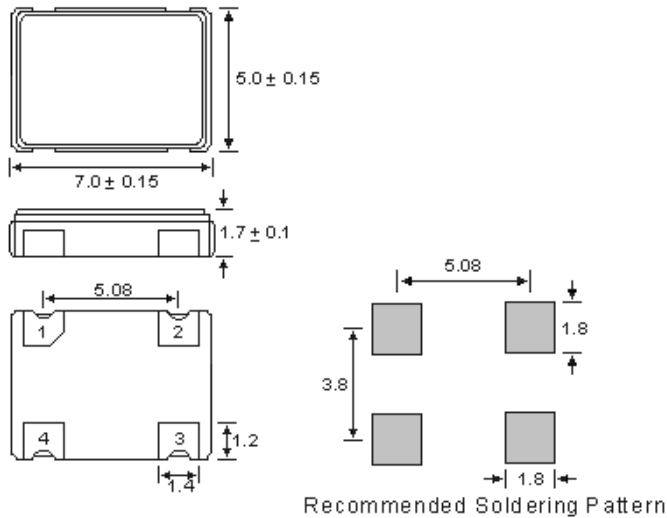
Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	$V_S + 10\%$	V	V_S to GND
Storage Temperature	-55	+125	°C	

Ordering Code

Model	Option 1 [Supply Voltage]	Option 2 [Stability]	Option 3 [Temperature range]	Revision	Frequency [MHz]
AXE7050P	27, 33, 50	25	0C	Rev.3	12.345678

Example: AXE7050P-50-25-0C_Rev.3 – 12.345678 MHz

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	OE	Output Enable/Disable
7	GND	Ground
8	RF OUT	RF Output
14	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
3	D1	01.10.2012	Editorial changes	BN	BN
3	D2	04.04.2014	Environmental conditions updated, editorial changes	HH	HH