AXTAL ADVANCED XTAL PRODUCTS

Specification	AXE5032P	Rev.: 1	Date: 2014-04-04

Oscillator type: Programmable Crystal Oscillator in 5x3.2 mm package

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	1 1 1		133 100 66	MHz MHz MHz	V_S = 5 V V_S = 3.3 V V_S = 2.7 V
Programmable frequencies	Any discrete frequency				At delivery
Frequency stability					
Overall stability			± 100 ± 50 ± 25	ppm ppm ppm	Option 2 = “100” Option 2 = “50” Option 2 = “25”
Long term (aging) per year			± 5	ppm	@ 25°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			2	ms	
Jitter (RMS)			50 40	ps ps	Freq ≤ 33 MHz Freq > 33 MHz
Output Enable/Disable (OE) Input	Open or HIGH: RF output LOW: Tri-state output				
Supply voltage V_S	2.5 3.0 4.5	2.7 3.3 5.0	3.0 3.6 5.5	V V V	Option 1 = “27” Option 1 = “33” Option 1 = ”50”
Current consumption (steady state, unloaded)			20 25 45	mA mA mA	Option 1 = “27” Option 1 = “33” Option 1 = ”50”
Operating temperature range	0 -20 -40		+70 +70 +85	°C °C °C	Option 3 = “0C” Option 3 = “2C” Option 3 = “4C”
Enclosure (see drawing) (LxWxH)	5.16x3.35x1.3 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

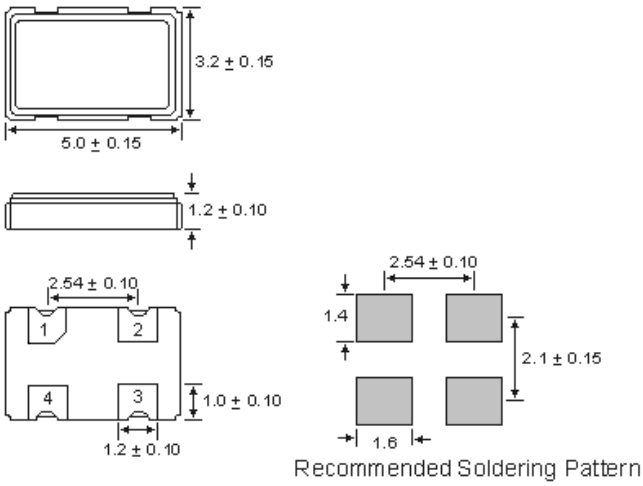
Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	V_S + 10%	V	V_S to GND
Storage Temperature	-55	+125	°C	

Ordering Code

Model	Option 1 [Supply Voltage]	Option 2 [Stability]	Option 3 [Temperature range]	Revision	Frequency [MHz]
AXE5032P	27, 33, 50	25	0C	Rev.1	12.345678

Example: AXE5032P-50-25-0C_Rev.1 – 12.345678 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	✖ Yes ☐ No		
RoHS compliant	✖ Yes ☐ 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	D1	01.10.2012	Editorial changes	BN	BN
1	D2	04.04.2014	Environmental conditions updated, editorial changes	HH	HH