

Specification	AXGX75	Rev.: 2	Date: 2014-06-20
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Oscillator type: Gated High Stability Crystal Oscillator

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	950		1532	MHz	
Standard frequencies	1030.000 / 1090.000			MHz	
Frequency stability					
Initial tolerance at delivery			±10	ppm	@ +25°C
vs. operating temperature range			±30	ppm	
Long term (aging) per year			±5	ppm	
Gate function (optional)	Option 1				
Low level input voltage V_{GL}		0	1.5	V	
High level input voltage V_{GH}	3.5	5.0	5.5	V	
Input resistance	10			kΩ	
Input capacitance		5	10	pF	
Turn-on time		30	40	ns	
Turn-off time		10	30	ns	
RF output					
Signal waveform	Sine wave				
Load R_L	50			Ω	
Output level Gate ON	+10	+12		dBm	@ $V_{GATE} > +3.5 V$
Output level Gate OFF			-50	dBm	@ $V_{GATE} < +1.5 V$
Sub-harmonics (multiples of $f_{OUT}/10$)		-40	-30	dBc	(Note 2)
Harmonics		-40	-30	dBc	
Supply voltage V_S	11.4	12.0	12.6	V	
Current consumption					
Gate ON		42	50	mA	@ $V_{GATE} > +3.5 V$
Gate OFF		7	15	mA	@ $V_{GATE} < +1.5 V$
Operating temperature range	-40		+70	°C	
Enclosure (see drawing) (LxWxH)	25.8x25.8x12.7 max.			mm	IEC 60679-3 CO 43
Weight			20	g	
Packing	Palette				

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Depending on frequency multiplication factor may be higher than 10

Absolute Maximum Ratings

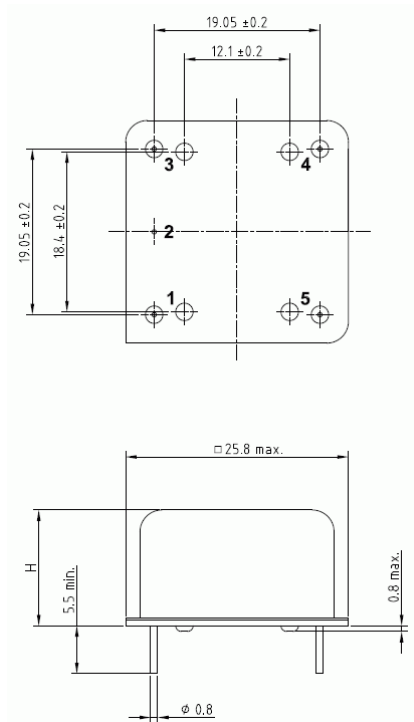
Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	$V_S + 10\%$	V	V_S to GND
Gate Voltage V_{GATE}	-0.5	7.0	V	V_{GATE} to GND
Storage Temperature	-55	+125	°C	

Ordering Code

Model	Option 1 [Gate Function]	Revision	Frequency [MHz]
AXGX75	G = With Gate function Blank = No Gate function	Rev.2	1030.000

Example: AXGX75G_Rev.2 – 1030.000 MHz

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	RF OUT	RF Output
2	GND	Ground
3	V_{GATE}	Gate Input or N.C.
4	N.C.	No Connection
5	V_S	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	10.02.2014	First issue	BN	BN
2	D0	20.06.2014	Frequency range extended, environmental conditions updated, editorial changes	HH	HH