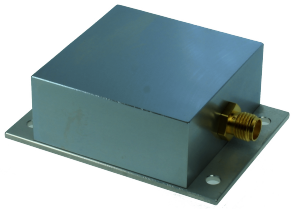
Data sheet

AXGX90 — High stability Gated 1030/1090 MHz Crystal Oscillator (SMA)

FEATURES

- For Secondary Radar Applications (IFF)
- SMA Output connector
- Sine wave Output
- Supply Voltage 12V

54 x 40 x 19 mm max (h = 2.0 mm)



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	950		1532	MHz	
Standard Frequencies		1030 / 1090		MHz	
Frequency stability					
Initial tolerance at delivery			± 10	ppm	@+25°C
vs. temperature in operating temperature range			± 30	ppm	
operating temperature range	-40		+70	°C	
Long term (aging)			± 5	ppm	per year
Frequency adjustment range					
Electronic Frequency Control (EFC)		n.a.			
RF output					
Signal waveform		Sine wave			R_L = 50 Ω
Output level (Gate ON)@ +25°C Output level (Gate OFF)	+ 10	+ 12	 -50	dBm dBm	@V_{Gate} > +3.5V @V_{Gate} < +1.5V
Sub-Harmonics (multiples of F_{OUT}/10)		-40	-30	dBc	(Note 2)
Harmonics		-40	-30	dBc	
Gate Function		Option 1			
Low level input voltage V_{Gate}		0	1.5	V	
High level input voltage V_{Gate}	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	
Supply voltage V_S	11.4	12.0	12.6	V	
Current consumption Gate ON Gate OFF		 42 7	 50 15	 mA mA	 @V_{Gate} > +3.5V @V_{Gate} < +1.5V
Operable temperature range	-55		+85	°C	
Storage temperature range	-55		+125	°C	
Enclosure (see drawing) (LxWxH)		54 x 40 x 19 max.		mm	h = 2.0 mm
Weight			60	gram	
Packing		Palette			

Notes:

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

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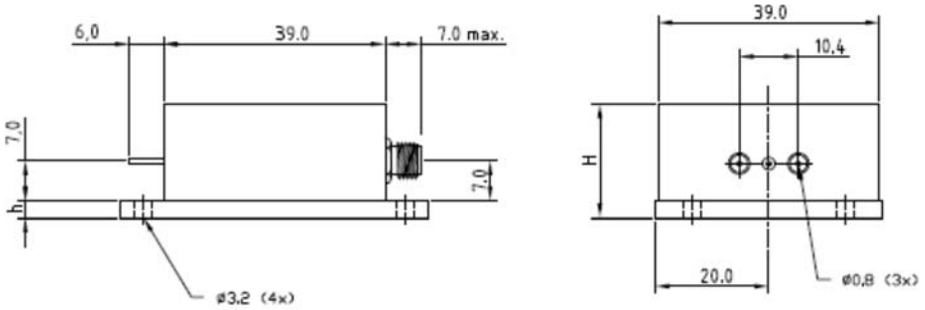
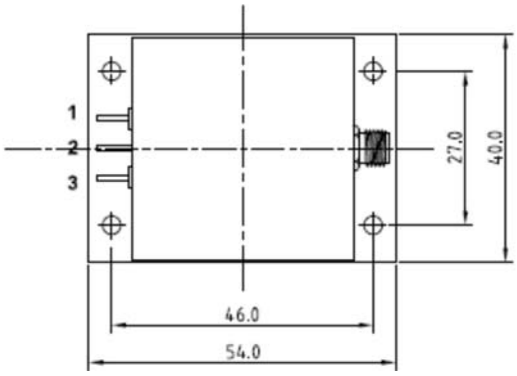
Ordering Code:

Model (Specification)	Option 1 - Gate Function	Frequency [MHz]
AXGX90	G = with Gate function Blank = no Gate function	1030.000

Enclosure drawing





Pin#	Symbol	Function
1	GATE	Gating Input
2	GND	Ground
3	V_S	Supply Voltage
SMA	RF OUT	RF Output

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

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