

Data sheet

AXGS10

Gated SAW Oscillator in SMD Package

(Rev.: 4 date: 2014-06-20)

- Gated SAW Oscillator
- SMD Package
- Standard frequencies available

20.3 x 13 x 5.7mm



Parameter	min.	typ.	max.	Unit	Condition
Frequency Range	950		1532	MHz	
Standard frequencies	970/1030/1090/1150/1532			MHz	
Frequency stability					
Initial tolerance at delivery			± 150	ppm	@+25°C
vs. operating temperature range			± 350	ppm	
operating temperature range	-40		+85	°C	
long term (aging)			± 5	ppm/year	
Gate Function (optional)	Option 1				
Low level input voltage VGL		0	1.5	V	
High level input voltage VGH	3.5	5.0	5.5	V	
Input resistance	10			kΩ	
Input capacitance		5	10	pF	
Turn-on time			40	ns	
Turn-off time			30	ns	
RF output					
Signal waveform	Sine wave				R _L = 50 Ω
Output level Gate ON	+ 7			dBm	@ V _{GATE} >3.5 V
Output level Gate OFF			-50	dBm	@ V _{GATE} < +1.5 V
Subharmonics	none			dBc	
Harmonics			-30	dBc	
Supply voltage V _s	4.75	5.0	5.25	V	
Current consumption	Gate ON	45	60	mA	@ V _{GATE} >3.5 V
	Gate OFF	10	20	mA	@ V _{GATE} < +1.5 V
Operable temperature range	-55		+90	°C	
Storage temperature range	-55		+105	°C	
Enclosure (see drawing) (LxWxH)	20.3x13.0x5.7max.			mm	Similar to IEC 61837 CO 30
Weight			3	gram	
Packing	Tape & Reel				IEC 60286-3

Notes:

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

Ordering Code:

Model (Specification)	Option Gate Function	Revision	Frequency [MHz]
AXGS10	G = with Gate function Blank = no Gate function	Rev.4	1090.000

Example: AXGS10G_Rev.4-1090.000 MHz

FCD-Tech B.V.

P.O. Box 1183
1700 BD Heerhugowaard
Netherlands

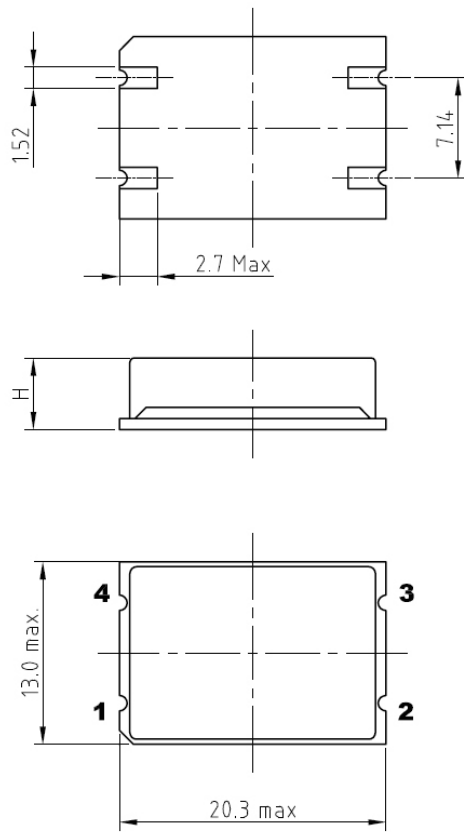
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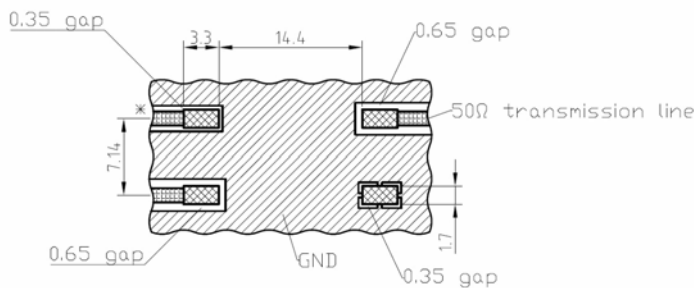
Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	V _{GATE}	Gating Input or N.C.
2	GND	Ground, case
3	RF OUT	RF Output
4	V _S	Supply Voltage

Recommended footprint



- Top View -

* Recommended to place 1 nF and 1 μF blocking capacitor close to supply voltage pin

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Absolute Maximum Ratings

Parameter	min.	max.	Unit	Condition
Supply Voltage V_s	-0.5	$V_s + 10\%$	V	V_s to GND
Control Voltage V_c	-0.5	15	MHz	V_c to GND
Storage Temperature	-55	+125	°C	

Absolute Maximum Ratings

Parameter	Procedure		Condition
Electrostatic discharge (ESD)			
THD devices	IEC60749-26	HBM	2000 V
SMD devices	IEC60749-27	MM	200V
Washable	No		
RoHS compliant	Yes		

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	2-20	5.6.3	208H		3.6.52	Test Ta Method 1
Resistance to soldering heat	2-58		210F		3.6.48	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	108A		4.8.35	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

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