



### Features and Benefits

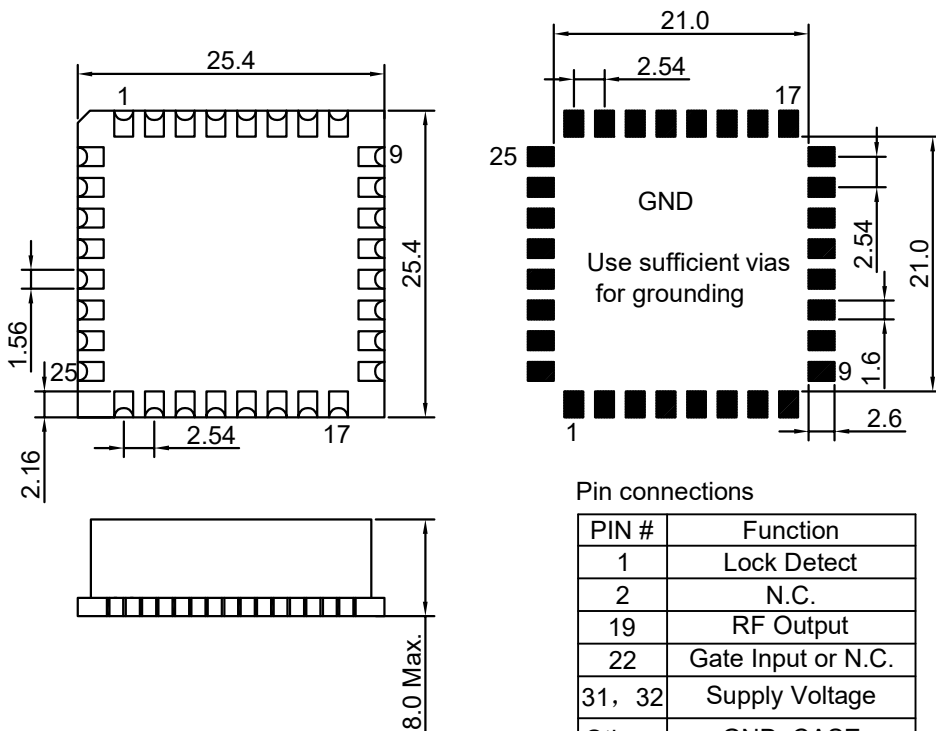
Frequency range: 1090MHz  
Supply voltage: 5.0V  
Current: 200mA Max  
Output waveform: Sinewave  
Frequency stability vs. operating temperature: ±1.0ppm  
Aging: ±2.0ppm per year  
Phase noise@10KHz: -110dBc/Hz  
Operating temperature: -40°C to +55°C  
Size:25.4x25.4x8.0mm

### Typical Applications

Secondary Radar  
IFF  
Air Security

### Mechanical Drawing & Pin Connections

Drawing No: MD22001(-1)



Note:  
50 Ohm transmission line for PIN# 19 - RF Output

#### Pin connections

PIN #	Function
1	Lock Detect
2	N.C.
19	RF Output
22	Gate Input or N.C.
31, 32	Supply Voltage
Others	GND, CASE

Unit in mm  
1mm = 0.0394 inches



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency	$F_{nom}$			1090		MHz	
<b>RF Output</b>							
Signal Waveform			Sinewave				
Load			50			ohm	
Output level GATE ON			+10		+26	dBm	@ $V_{GATE} > +3.5V$
Output level variation					$\pm 2.0$	dB	
Output level GATE OFF				-60	-50		@ $V_{GATE} < +1.5V$
Spurious					-80	dBc	
Harmonics					-30	dBc	
<b>Power Supply</b>							
Supply Voltage	$V_{cc}$		4.75	5.0	5.25	V	
Current (Note 2)					200	mA	
Lock detect output LD (Note 1)			3.0			V	PLL Locked
<b>Gate Function</b>							
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		kohm	
Input capacitance					10	pF	
Turn-on time				35	40	ns	
Turn-off time				25	30	ns	
<b>Frequency Stability</b>							
Versus Operating Temperature Range					$\pm 1.0$	ppm	
Initial Tolerance		+25°C			$\pm 1.0$	ppm	
Aging 1 <sup>st</sup> Year					$\pm 2.0$	ppm	
Phase noise		@10KHz		-110		dBc/Hz	
		@100KHz		-130		dBc/Hz	
		@1MHz		-150		dBc/Hz	
<b>Environmental Conditions</b>							
Operation temperature range			-40°C to +55°C				

Note 1: Internal PLL with TCXO reference

Note 2: Current consumption depends on output level