



**Features and Benefits**

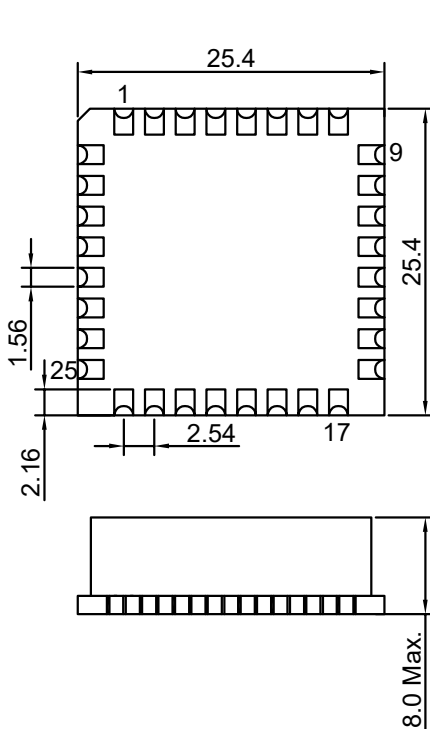
Frequency range: 1160MHz  
 Supply voltage: 5.0V  
 Current: 200mA Max  
 Output waveform: Sinewave  
 Frequency stability vs. operating temperature: ±1.0ppm  
 Aging: ±2.0ppm per year  
 Phase noise@10KHz: -110dBc/Hz  
 Operating temperature: -40°C to +55°C  
 Size:25.4x25.4x8.0mm

**Typical Applications**

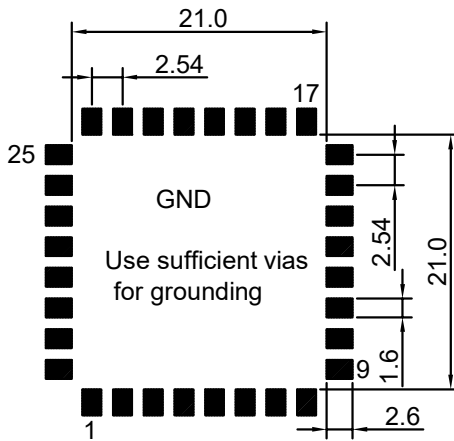
Secondary Radar  
 IFF  
 Air Security

**Mechanical Drawing & Pin Connections**

Drawing No: MD22001(-1)



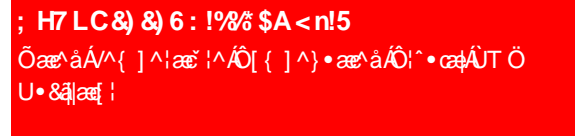
Note:  
 50 Ohm transmission line for PIN# 19 - RF Output



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 <sub>nom</sub>			1160		MHz	
<b>RF Output</b>							
Signal Waveform			Sinewave				
Load			50			ohm	
Output level GATE ON			+10		+26	dBm	@V <sub>GATE</sub> >+3.5V
Output level variation					±2.0	dB	
Output level GATE OFF				-60	-50		@V <sub>GATE</sub> <+1.5V
Spurious					-80	dBc	
Harmonics					-30	dBc	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>		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 <sub>GL</sub>				0	1.5	V	
High level input voltage V <sub>GH</sub>			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					±1.0	ppm	
Initial Tolerance		+25°C			±1.0	ppm	
Aging 1 <sup>st</sup> Year					±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