



RFM Integrated Device, Inc.

## PRODUCT SPECIFICATION

Part Number: XOC9001

OCXO, 100 MHz,  $\pm 300$  ppb @  
 $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

# 25.4x25.4x12.7mm 100MHz OCXO



Characteristics	Values	Unit	Note
Nominal Frequency	100	MHz	±300 ppb @ 25°C ±2°C

## Temperature Range

Characteristics	Min.	Nom.	Max.	Unit	Note
Operating	-20		70	°C	

## Power - Consumption

Characteristics	Min.	Nom.	Max.	Unit	Note
Power Supply	11.4	12	12.6	V	
Max values at steady state			140	mA	at 25°C
Max values during Warm-up			350	mA	at turn on

## Frequency control

Characteristics	Min.	Nom.	Max.	Unit	Note
Frequency pulling range	+/-3			ppm	Reference to normal center voltage
Voltage Control	0	5	10	V	
Reference Voltage	9.5	10	10.5	V	
Slope		Positive			
Linearity	-10		10	%	at 25°C

## Output Signal

### SINE

Characteristics	Min.	Nom.	Max.	Unit	Note
Output power	13			dBm	
Harmonics Spur			-30	dBc	
Non-harmonics Spur			-100	dBc	
Load1		50		Ω	Load ±5%

## Frequency Stability

Characteristics	Min.	Nom.	Max.	Unit	Note
VS Temperature Range			50	±ppb	-20~70°C refer to freq at 25°C
VS Power Supply variation			5	±ppb	Vcc ±5% Static
VS Load variation			5	±ppb	Load ±10%

## Aging

Characteristics	Values			Unit	Note
	1 day	1 Year	15 Years		
Medium/Long Term Stability	0.005	0.5	2	±ppm	After continuous operating for 1 month at 25°C
Warm Up	5 min		50	±ppb	Reference to 1 hour on @ 25°C

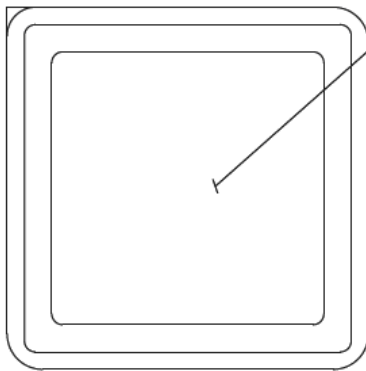
## Phase Noise

Characteristics	Values						Unit	Note
	10 Hz	100 Hz	1 KHz	10 KHz	100 KHz	1 MHz		
Static Conditions	-97	-130	-160	-173	-175	-178	dBc/Hz	Max value

Short-term Stability	1ms	100ms	1s	10s	After 1 hour power on
			5.0E-11		

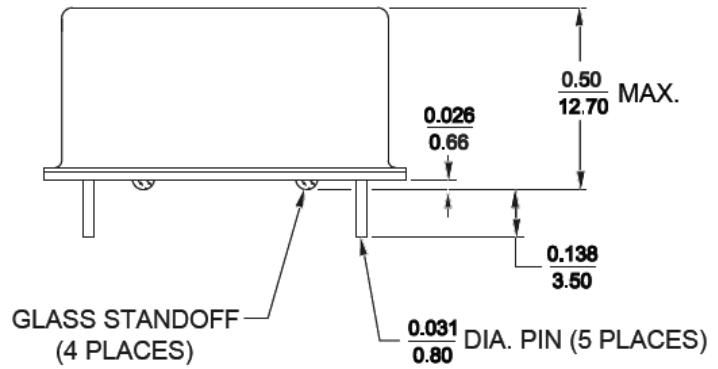
## Mechanical drawing Package

[TOP VIEW]



MARKING THIS SURFACE

[SIDE VIEW]



GLASS STANDOFF (4 PLACES)

0.031 DIA. PIN (5 PLACES)  
0.80

### TOLERANCES

UNLESS OTHERWISE SPECIFIED:

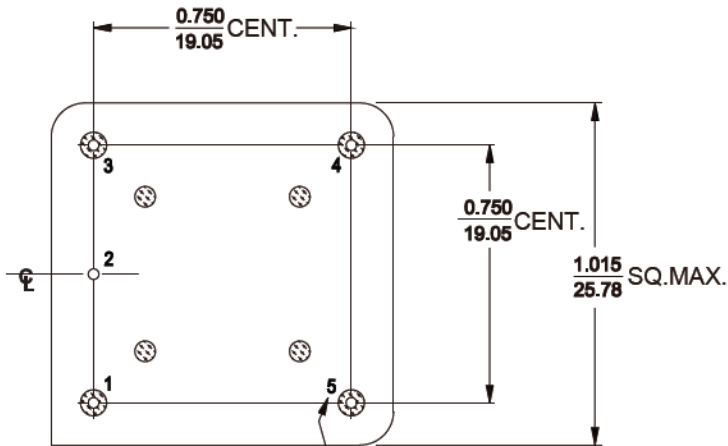
ANGLES:  $\pm 1$  DEGREE

FRACTIONS:  $\pm 1/32$  INCH

DECIMALS:  $.XX \pm 0.015$ ,  $.XXX \pm 0.010$  INCH

$\frac{\text{INCH}}{\text{mm}}$  (REFERENCE ONLY)

[BOTTOM VIEW]



Numbers for reference only.  
(Not stamped on unit)

PIN CONNECTIONS	
PIN	FUNCTION
1	R. F. OUTPUT
2	0 VOLTS & CASE
3 (See Note 1)	VCO INPUT or NOT CONNECTED
4 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED or OVEN MONITOR
5	+VDC

### Note:

1. If the specification does not specify parameters for either PIN3 or PIN4 then that respective PIN is NOT internally CONNECTED

Label  
(Top view)

