



RFM Integrated Device, Inc.

## PRODUCT SPECIFICATION

Part Number: XOC9003

OCXO, 10 MHz,  $\pm 500$   
ppb @ 25°C  $\pm 2^\circ\text{C}$

# 9.7x7.5x4.1mm 10.0MHz OCXO



Characteristics	Values	Unit	Note
Nominal Frequency	10.0	MHz	±500 ppb @ 25°C ±2°C

## Temperature Range

Characteristics	Min.	Nom.	Max.	Unit	Note
Operating	-40		85	°C	

## Power - Consumption

Characteristics	Min.	Nom.	Max.	Unit	Note
Power Supply	3.135	3.3	3.465	V	
Max values at steady state			0.4	W	at 25°C
Max values during Warm-up			330	mA	at turn on

## Output Signal HCMOS

Characteristics	Min.	Nom.	Max.	Unit	Note
Level	VOH	2.7		Volt	
	VOL		0.3	Volt	
Rise/Fall time			4	ns	10% to 90%
Duty cycle	45		55	%	
Load		15		pF	

## Frequency Stability

Characteristics	Min.	Nom.	Max.	Unit	Note
Total			4.6	±ppm	20 years aging, temperature, voltage, and initial set frequency
VS Temperature Range			20	±ppb	-40~85°C refer to freq at 25°C
Frequency slope			2	±ppb/C	
VS Power Supply variation			10	±ppb	±5% Change
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Reflow shift			1	±ppm	After 1 hr at 25°C
G sensitivity			3	Ppb/G	Each axis

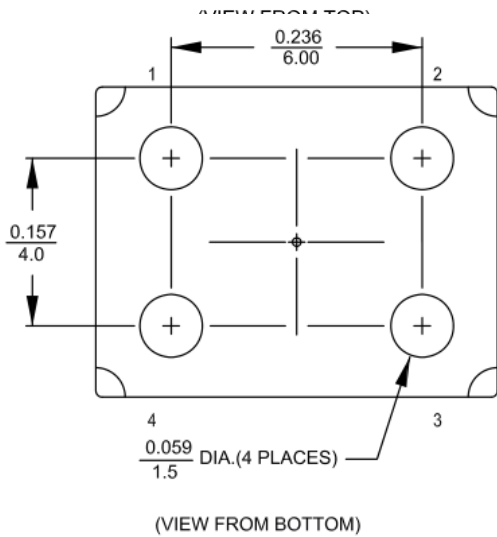
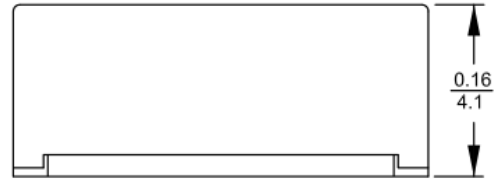
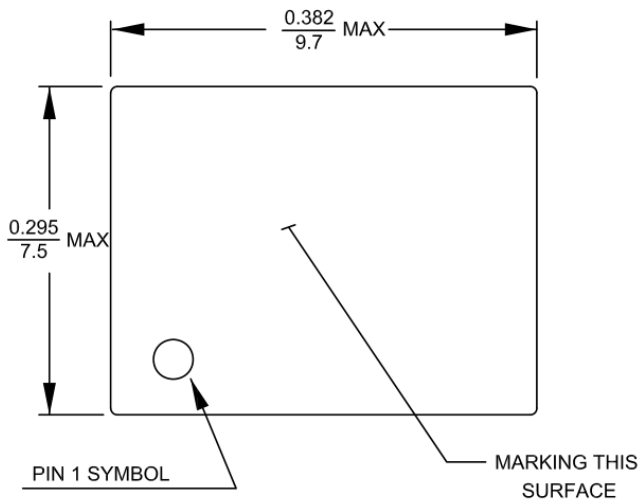
## Aging

Characteristics	Values			Unit	Note
	1 day	1 Year	10Years		
Medium/Long Term Stability	0.003	1	3	±ppm	After continuous operating for 1 month at 25°C
Warm Up	3 min		100	±ppb	Refer to 1 hour on @ 25°C

## Phase Noise

Characteristics	Values						Unit	Note
	10 Hz	100 Hz	1 KHz	10 KHz	100KHz	1 MHz		
Static Conditions	-90	-120	-140	-148	-150	-153	dBc/Hz	Typ value
Short-term Stability	1ms	100ms	1s	10s	After 1 hour power on			
			1.0E-10					

## Mechanical drawing Package



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

Note 1. If the specification does not specify parameters for PIN 1 then PIN1 must remain unconnected.

Note 2. Copper in this area should be kept to a minimum to reduce heat loss from OCXO.

Note 3. Bottom side reflow is forbidden unless specified in the oscillator specification.

## Label (Top view)

