



### Features and Benefits

- Frequency range: 15-2100MHz
- Output waveform: CML
- Supply voltage: 1.8V
- Current: 70mA Max.
- Frequency stability vs. temperature:  $\pm 100$ PPM
- Operating temperature:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$
- Size: 3.2x2.5x1mm
- Package type: Surface Mount



### Typical Applications

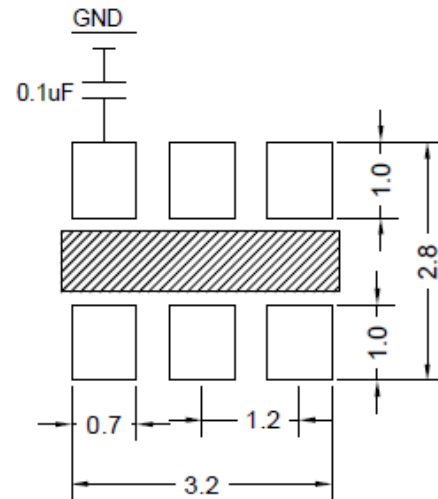
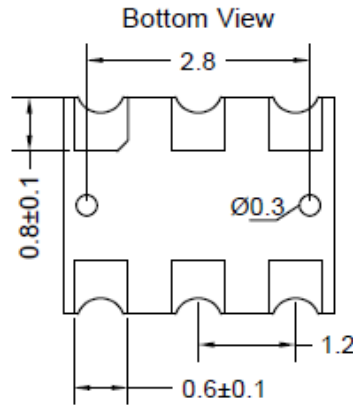
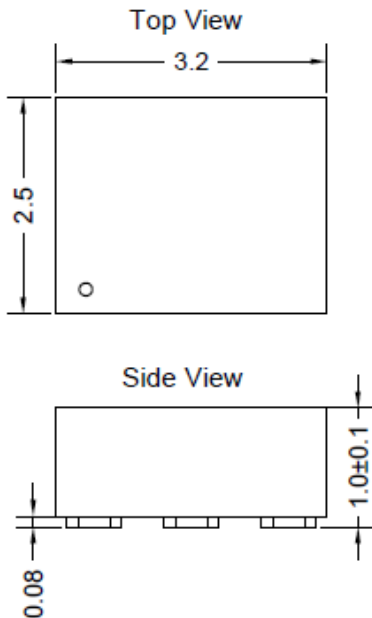
- Defense Systems
- Mobile Radar Station
- Gigabit Ethernet, SONET/SDH
- Server & Storage, Data Center
- SD/HD Video, FPGA Clock Generation

### Description

VCXO3225BM-LJ\_CML-241 is the high frequency and low jitter differential VCXO. It can be widely used in digital circuits.

### Mechanical Drawing & Pin Connections

**Drawing No:** MD240085-1



PIN	Function
#1	Control Voltage
#2	OE
#3	GND
#4	OUTPUT
#5	OUTPUT_N
#6	Supply Voltage

Please keep the middle area blank.  
Do not layout any lines in this space.  
To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vcc and GND pads

Unit in mm  
1mm = 0.0394 inches



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Operational Frequency	f <sub>0</sub>		15		2100	MHz		
<b>RF Output</b>								
Output Waveform			CML					
Output Level		Output high	V <sub>cc</sub> -0.085		V <sub>cc</sub>	V		
		Output low	V <sub>cc</sub> -0.6		V <sub>cc</sub> -0.32	V		
Duty Cycle			45		55	%		
Rise & Fall Time					0.35	ns		
Startup Time					8	ms		
Tri-State (Input to Pin2)		Enable	0.7 V <sub>cc</sub>			V		
		Disable			0.3 V <sub>cc</sub>	V		
<b>Power Supply</b>								
Voltage	V <sub>cc</sub>	±10%		1.8		V		
Supply Current		V <sub>cc</sub> =1.8V			70	mA		
Stand by Current		V <sub>cc</sub> =1.8V			70	mA		
<b>Control Voltage</b>								
Control Voltage		V <sub>cc</sub> =1.8V	0.18	0.9	1.62	V		
Pulling Range			±50		±250	ppm		
Linearity					±10	%		
Modulation Bandwidth			5		20	KHz		
VC Input Impedance			5			Mohm		
<b>Frequency Stability</b>								
Versus Temperature					±100	ppm		
Phase Noise At V <sub>cc</sub> =3.3V, 805.664MHz Frequency		1KHz		-107		dBc/Hz		
		10KHz		-117				
		100KHz		-125				
		1MHz		-135				
RMS Phase Jitter		Integrated 12KHz-20MHz	150		300	fs		
Period Jitter					50	ps		
<b>Environmental Conditions</b>								
Operating temperature range			-20°C to +70°C					