



### Features and Benefits

Frequency range: 15-2100MHz  
Output waveform: LVPECL  
Supply voltage: 3.3V  
Current: 110mA Max.  
Frequency stability vs. temperature:  $\pm 50$ PPM  
Operating temperature:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$   
Size: 3.2x2.5x1mm  
Package type: Surface Mount



### Typical Applications

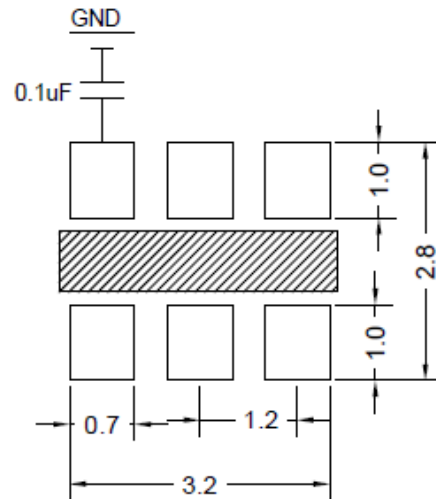
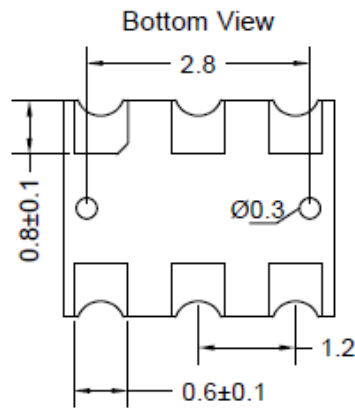
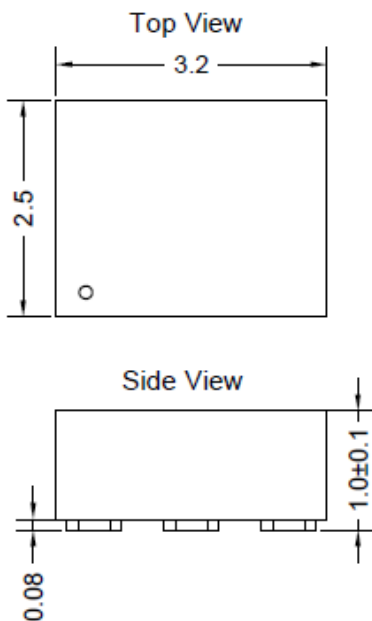
Defense Systems  
Mobile Radar Station  
Gigabit Ethernet, SONET/SDH  
Server & Storage, Data Center  
SD/HD Video, FPGA Clock Generation

### Description

VCXO3225BM-LJ\_LVPECL-232 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

Unit in mm  
1mm = 0.0394 inches

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



## 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			LVPECL				
Output Level		Output high	V <sub>cc</sub> -1.165		V <sub>cc</sub> -0.8	V	
		Output low	V <sub>cc</sub> -2.0		V <sub>cc</sub> -1.55	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%		3.3		V	
Supply Current		V <sub>cc</sub> =3.3V			110	mA	
Stand by Current		V <sub>cc</sub> =3.3V			110	mA	
<b>Control Voltage</b>							
Control Voltage		V <sub>cc</sub> =3.3V	0.3	1.65	3	V	
Pulling Range			±50		±250	ppm	
Linearity					±10	%	
Modulation Bandwidth			5		20	KHz	
VC Input Impedance			5			Mohm	
<b>Frequency Stability</b>							
Versus Temperature					±50	ppm	
Phase Noise At V <sub>cc</sub> =3.3V, 873.515MHz Frequency		1KHz		-106		dBc/Hz	
		10KHz		-115			
		100KHz		-123			
		1MHz		-133			
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				