



Features and Benefits

- Frequency range: 15-2100MHz
- Output waveform: LVDS
- Supply voltage: 1.8/2.5V/3.3V
- Current: 90mA Max.
- Frequency stability vs. temperature: ± 50 PPM
- Operating temperature: -40°C to $+85^{\circ}\text{C}$
- Size: 3.2x2.5x1mm
- Package type: Surface Mount



Typical Applications

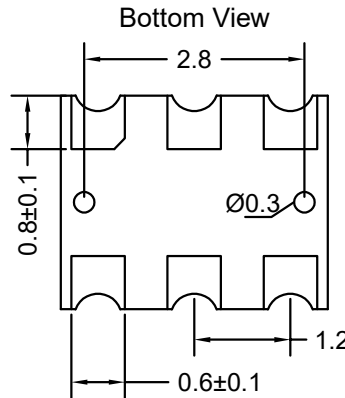
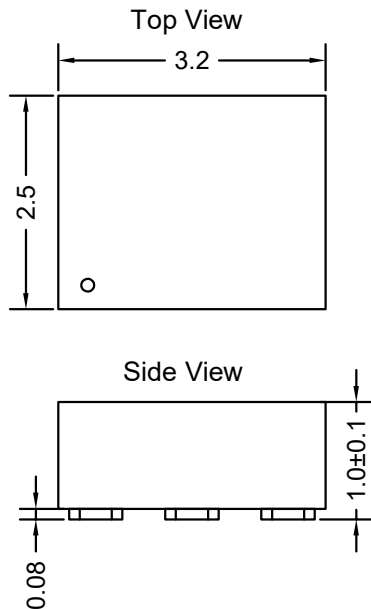
- Defense Systems
- Mobile Radar Station
- Gigabit Ethernet, SONET/SDH
- Server & Storage, Data Center
- SD/HD Video, FPGA Clock Generation

Description

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

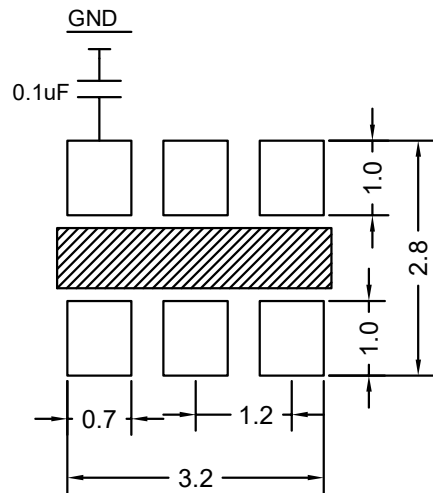
Mechanical Drawing & Pin Connections

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 _o		15		2100	MHz	
RF Output							
Output Waveform			LVDS				
Output Level		Output high			1.6	V	
		Output low	0.9			V	
Duty Cycle			45		55	%	
Rise & Fall Time					0.35	ns	
Startup Time					8	ms	
Tri-State (Input to Pin2)		Enable	0.7 V _{cc}			V	
		Disable			0.3 V _{cc}	V	
Power Supply							
Voltage	V _{cc}	±10%		1.8/2.5/ 3.3		V	See ordering section
Supply Current		V _{cc} =3.3V			90	mA	
		V _{cc} =2.5V			80	mA	
		V _{cc} =1.8V			70	mA	
Stand by Current		V _{cc} =3.3V			90	mA	
		V _{cc} =2.5V			80	mA	
		V _{cc} =1.8V			70	mA	
Control Voltage							
Control Voltage		V _{cc} =3.3V	0.3	1.65	3	V	
		V _{cc} =2.5V	0.25	1.25	2.25	V	
		V _{cc} =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	
Frequency Stability							
Versus Temperature					±25	ppm	See ordering section
Phase Noise At V _{cc} =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	
Environmental Conditions							
Operating temperature range		-40°C to +85°C (See ordering section)					



Ordering Information

VCXO3225BM-LJ_LVDS	-	xMHz-	01	02	03
Group			Code		

For example, VCXO3225BM-LJ-LVDS-155.52MHz-111 denotes the XO has the following specifications:

Frequency: 155.52MHz
 Temperature Range: -10°C to +60°C
 Stability Over Temperature: ±20 ppm
 Supply Voltage: 1.8V

01	Temperature Range
Code	Specification
1	-10°C to +60°C
2	-20°C to +70°C
3	-40°C to +85°C

02	Frequency Stability
Code	Specification
1	±20 ppm
2	±25 ppm
3	±50 ppm
4	±100 ppm

03	Supply Voltage
Code	Specification
1	1.8 V
2	2.5 V
3	3.3 V

Frequency Stability vs. Temperature

Temperature Range [°C]	Frequency Stability			
	±20 ppm	±25 ppm	±50 ppm	±100 ppm
-10°C to +60°C	Available	Available	Available	Available
-20°C to +70°C	Conditional	Available	Available	Available
-40°C to +85°C	Not Available	Conditional	Available	Available

Inclusive of calibration @ 25°C, operating temperature range, input Voltage variation, load variation, aging (1st year), shock and vibration