Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

VCXO2520BM-LJ_CML
2.5x2.0mm CML VCXO

Features and Benefits

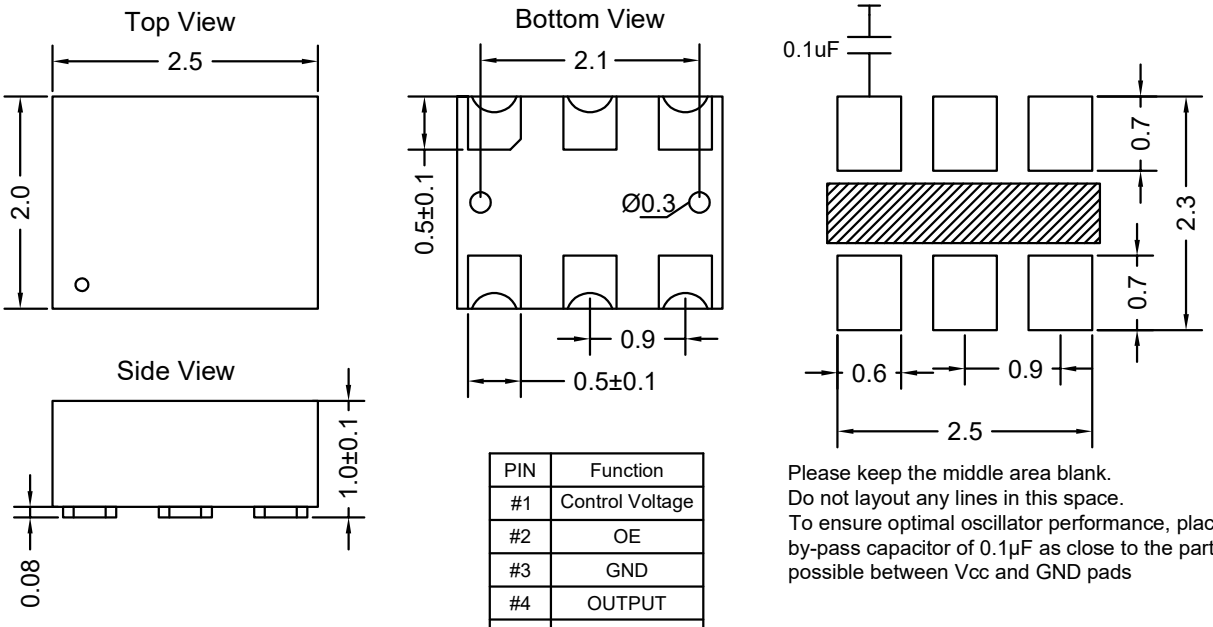
Frequency range: 15-2100MHz
Output: CML
Supply voltage: 1.8V/2.5V/3.3V
Current: 90mA Max.
Frequency stability vs. temperature: ±20PPM
Operating temperature: -40°C to +85°C
Size: 2.5x2x1mm
Package type: SMD

Typical Applications

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

Mechanical Drawing & Pin Connections

Drawing No: MD240070-1



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

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0		15		2100	MHz	
RF Output							
Output Waveform				CML			
Output Level		Output high	Vcc-0.085		Vcc	V	
		Output low	Vcc-0.6		Vcc-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_{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	Vc	V_{cc} =3.3V	0.3	1.65	3	V	
	Vc	V_{cc} =2.5V	0.25	1.25	2.25	V	
	Vc	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, 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	
Environmental Conditions							
Operating temperature range		-40°C to +85°C (See ordering section)					

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Ordering Information

VCXO2520BM-LJ_CML	-	xMHz-	01	02	03
Group			Code		

For example, VCXO2520BM-LJ-CML-100MHz-111 denotes the VCXO has the following specifications:

Frequency: 100MHz
Temperature Range: -10°C to +60°C
Stability Over Temperature: ±20 ppm

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	2.5 V
2	3.3 V
3	1.8 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	No Available	Conditional	Available	Available

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