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

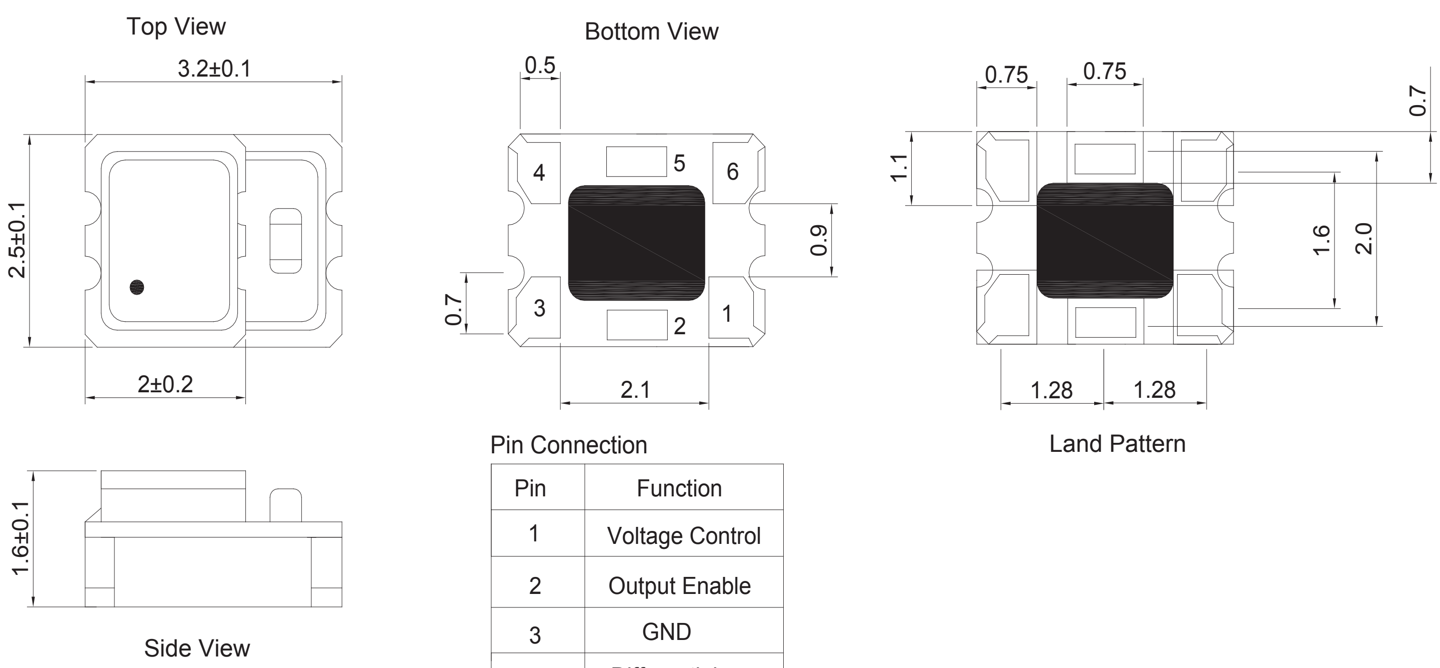
TCXO3225BL-FD-300MHz-A-V
300MHz TCXO

Features and Benefits
Frequency range: 300MHz
Supply voltage: 3.3V
Steady current: 55mA Typ.
Output waveform: PECL
Frequency stability vs. operating temperature: ±1.0ppm
Aging: ±2.0ppm first year
Phase noise@10KHz: -102dBc/Hz
Operating temperature: -40°C to +85°C
Size: 3.2x2.5x1.6 mm

Typical Applications
Frequency reference for real time clocks (RTCs)
Portable instruments
Timing synchronization for networks, servers, hubs, routers and switches
Smart metering, data loggers
GPS receivers. Telematics

Description
TCXO3225BL-FD-300MHz-A-V is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections
Drawing No: MD240002-1



Pin Connection

Pin	Function
1	Voltage Control
2	Output Enable
3	GND
4	Differential
5	Complementary
6	Vcc

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_{nom}			300		MHz	
RF Output							
Signal Waveform			PECL				
Load	R_L		50ohm into Vcc-2V or Thevenin equivalent				
High-Level Voltage	V_H		Vcc-1.03		Vcc-0.6	V	
Low- Level Voltage	V_L		Vcc-1.85		Vcc-1.6	V	
Duty Cycle		±5%		50	55	%	
Rise and Fall time			0.2nS. (Typical) , 0.5nS. (max.) Tr / Tf: 20% ↔ 80% waveform				
Start up time			5 msec. (max.)				
Power Supply							
Supply Voltage	V_{cc}	±5%		3.3		V	
Current consumption					55	mA	
Current with output disabled				18		mA	
Frequency Stability							
Versus Operating Temperature Range		-40°C to +85°C		±1.0		ppm	
Initial Calibration Tolerance			±1.0 ppm. max. at +25°C±2°C. (at the shipment)				
Versus supply voltage		±5% change			±0.2	ppm	
Versus load		±10% change			±0.2	ppm	
Versus Reflow		1 reflow and measured 24 hours afterwards			±1.0	ppm	
Aging 1st Year		@25°C			±2.0	ppm	
Aging 10 Year		@25°C			±10	ppm	
Phase Noise		10Hz		-51		dBc/Hz	
		100Hz		-79		dBc/Hz	
		1KHz		-97		dBc/Hz	
		10KHz		-102		dBc/Hz	
		100KHz		-103		dBc/Hz	
		1MHz		-125		dBc/Hz	
		10MHz		-134		dBc/Hz	
RMS Jitter		12KHz-20MHz		1.5		psec	
Control Voltage Function on Pad 1							
Control Voltage Center and Range			+1.5V ± 1.0V				
Frequency Pulling Range			± 8 ppm min.				
Linearity			± 1 % typical. ± 10% max.				
Transfer Function			Positive Transfer				
Absolute Voltage			4.0 V max.				
Input Impedance			770 KΩ typical.				
Output Enable Function on pad 2							
OE Control on Pad 2			0.7% of Vcc (min.) to enable output. (open connection prohibit)				
			0.3% of Vcc (max.) to disable output				
Output Enable Time / Disable Time			200 nsec. Max. / 50 nsec. Max.				
Environmental,Mechanical Conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-50°C to +150°C						