

## Dynamic Engineers Inc.

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

# **Features and Benefits**

Frequency range: 10MHz Supply voltage: 3.3V Steady state: 1.3W Max Output waveform: LVTTL Frequency stability vs. operating temperature: ±10ppb Aging: ±50ppb per year Phase noise@10KHz: -156dBc/Hz Operating temperature: -40°C to +85°C Size:25.4x25.4x12.7mm

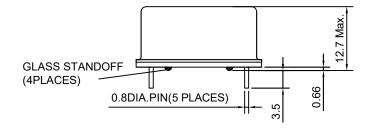
### **Typical Applications**

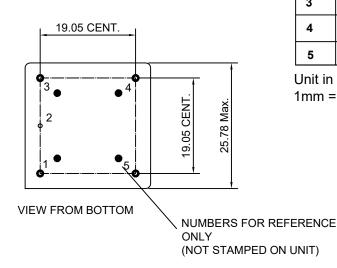
Small Cell, Portable Telecommunication Device Test and Instrumentation Synthesizer, Digital switch, Reference Timing Circuit

#### Description

OCXO2525BM-FD-10MHz\_LVTTL-3211 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: MD160042-3

#### **PIN Function**

Pin	Function
1	R.F. OUTPUT
2	GND
3	Control Votage
4	N.C.
5	Supply Voltage

Unit in mm 1mm = 0.039 inches

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Rev. 1

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside; such as data tables and araphs without notification to potential customers who may have earlier revisions in their possession.



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# **Specifications**

Oscillator	Curre	Condition		Value		Unit	Note
Specification	Sym	Condition	Min.	Тур.	Max.		
Operational Frequency	Fnom			10		MHz	
RF Output							
Waveform				Rectangula	•		
Level			LVTTL				
High Level			+2.4			V	
Low Level					+0.4	V	
Load	R∟			15pF			
Duty Cycle		@+1.65V	45	50	55	%	
Rise/Fall time		10% to 90%			6	ns	
Spurious					-60	dBc	
Electrical Frequency Adjustment (PIN =	<b>"VCO INPU</b>	IT")					
Tuning Range		VCO @ Min. Voltage			-0.5	ppm	Referenced to frequency at nominal Center
		VCO @ Max. Voltage	+0.5			ppm	Voltage
Control Voltage			0	1.65	3.3	V	
Slope				positive			
Linearity			-10		+10	%	
Input Impedance			100			Kohm	
Power Supply							
Supply Voltage	Vs		3.135	3.3	3.465	V	
Steady state		+25°C			1.3	W	
Current		@ turn on			1000	mA	
Frequency Stability							
Versus Operating Temperature Range		<b>ref to +25</b> ℃			±10	ppb	
Initial Frequency Accuracy		after turn on power 15 ±1 minutes; <=90 days following date code; VCO Input voltage @ Center Voltage ±0.001V			±0.1	ppm	
Versus supply voltage		±5% change			±0.5	ppb	
Versus Load		±5% change			±0.5	ppb	
Short Term		1070 onango			0.05	ppb/s	Root Allan
		Per day, at time of					variance
Aging		shipment			±0.5	ppb	
Aging Per Day		after 30 days			±0.5	ppb	
Aging 1 <sup>st</sup> Year					±50	ppb	
Aging 10 Years					±0.3	ppm	
		In 10 minutes		1			Reference to
Warm-up		@25±1°C			±10	ppb	1 hour
		1Hz		-95	-90	dBc/Hz	
		10Hz		-125	-120	dBc/Hz	
Phase Noise		100Hz		-140	-135	dBc/Hz	
		1kHz		-148	-145	dBc/Hz	
		10kHz		-156	-155	dBc/Hz	
		100kHz		-158	-155	dBc/Hz	
Environmental, Mechanical Conditions							
Operating temperature range	-40°C to						
Storage temperature range	-55°C to +105°C						
Humidity	MIL-STD-202, Method 103 Test Condition A; 95% RH @ +40°C, non-condensing,240 hours						
Vibration (non-operating)	MIL-STD	-202, Method 201; 0.06" to	tal p-p, 10-5	55Hz			
Shock (non-operating)		-202, Method 213, test con			sine		