



Features and Benefits

Frequency range: 10MHz
Supply voltage: 3.3V
Steady state: 1.3W Max
Output waveform: LVTTL
Frequency stability vs. operating temperature: ±3ppb, ±5ppb, ±10ppb
Aging: ±50ppb per year
Phase noise@10KHz: -156dBc/Hz
Operating temperature: -40°C to +85°C
Size:25.4x25.4x12.7mm

Typical Applications

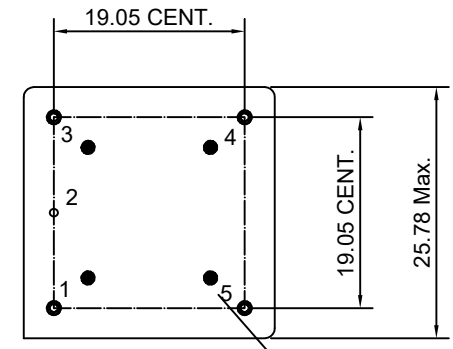
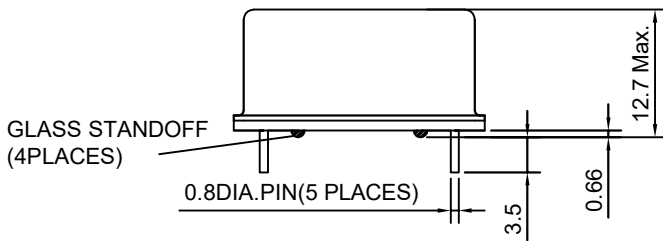
Small Cell, Portable Telecommunication Device
Test and Instrumentation
Synthesizer, Digital switch, Reference Timing Circuit

Description

OCXO2525BM-FD-10MHz_LVTTL 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: MD160042-2



VIEW FROM BOTTOM
NUMBERS FOR REFERENCE ONLY
(NOT STAMPED ON UNIT)

PIN Function

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

Unit in mm
1mm = 0.039 inches

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.



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F _{nom}			10		MHz	
RF Output							
Waveform			Rectangular				
Level			LVTTL				
High Level			+2.4			V	
Low Level					+0.4	V	
Load	R _L		15pF				
Duty Cycle		@+1.65V	45	50	55	%	
Rise/Fall time		10% to 90%			6	ns	
Spurious					-60	dBc	
Electrical Frequency Adjustment (PIN = "VCO INPUT")							
Tuning Range		VCO @ Min. Voltage			-0.5	ppm	Referenced to frequency at nominal Center Voltage
		VCO @ Max. Voltage	+0.5			ppm	
Control Voltage		Optional, Refer to Ordering Information	0		3.3	V	
			0		2.8	V	
Slope			positive				
Center Voltage		Optional, Refer to Ordering Information		+1.65		V	
				+1.4		V	
Linearity			-10		+10	%	
Input Impedance			100			Kohm	
Reference Voltage (PIN = "REFERENCE VOLTAGE") (Optional Function. Refer to Ordering Information.)							
Voltage			2.7	2.8	2.9	V	
Load			9			kohm	
Power Supply							
Supply Voltage	V _s		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		ref to +25°C	Pls see Ordering Information			ppb	
Initial Frequency Accuracy		@ +25 ±1°C; 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					0.05	ppb/s	Root Allan variance
Aging		Per day, at time of shipment			±0.5	ppb	
Aging Per Day		after 30 days			±0.5	ppb	
Aging 1 st Year					±50	ppb	
Aging 10 Years					±0.3	ppm	
Warm-up		In 10 minutes @25±1°C			±10	ppb	Reference to 1 hour
Phase Noise		1Hz		-95	-90	dBc/Hz	
		10Hz		-125	-120	dBc/Hz	
		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	Refer to Ordering Information						
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" total p-p, 10-55Hz						
Shock (non-operating)	MIL-STD-202, Method 213, test condition J; 30g,11ms, half-sine						



Ordering Information

OCXO2525BM-FD-10MHz_LVTTL	-	01	02	03	04
Group		Code			

For example, OCXO2525BM-FD-10MHz_LVTTL -1-1-2-1 denotes the OCXO has the following specifications:

Stability Over Temperature: ±3ppb
 Temperature Range: -30°C to +70°C
 Control Voltage: 1.4V
 Reference Voltage: N/A (No reference voltage)

01	Frequency Stability
Code	Specification
1	±3 PPB
2	±5 PPB
3	±10 PPB

02	Temperature Range
Code	Specification
1	-30°C to +70°C
2	-40°C to +85°C

03	Control Voltage
Code	Specification
1	+1.65 V
2	+1.4 V

04	Reference Voltage
Code	Specification
1	N/A
2	2.8 V