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

TCXO2525CR-ULG
Software Compensated 'ULTRA-LOW-G' TCXO

Features and Benefits

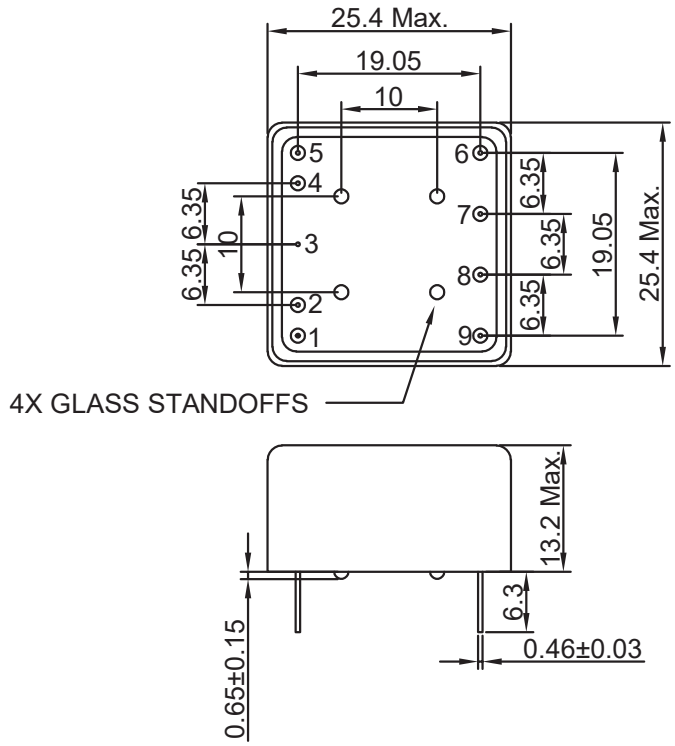
Frequency range: 1-60MHz
Supply voltage: 5.0V
Steady current: 80mA Max
Output waveform: LVCMOS
Frequency stability vs. operating temperature: ±5ppb
Aging: ±100ppb 20 years
Phase noise@10KHz: -154dBc/Hz
Operating temperature: -40°C to +105°C
Size:25.4x25.4x13.2mm

Typical Applications

GPS/GNSS
Naval Vessels
Commercial and Military Aircraft
Smart Munitions
Ground Vehicles
Industrial Construction Equipment
Autonomous Agricultural Vehicles

Mechanical Drawing & Pin Connections

Drawing No: MD230022-1



PIN Function

PIN #	Symbol
1	RF Output
2	N.C.
3	GND
4	N.C.
5	N.C.
6	N.C.
7	N.C.
8	N.C.
9	Supply Voltage

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency	F_{nom}		1		60	MHz	
RF Output							
Signal Waveform				LVCMOS			
Load				15		pF	
Output High	V_{OH}			3.3		V	
Output Low	V_{OL}			0.1		V	
Duty Cycle			45	50	55	%	
Rise/Fall Time		Measured between 10% and 90%			6	nS	
Power Supply							
Supply Voltage	V_{cc}		4.75	5.0	5.25	V	
Warm-up Time		±10ppb of 30 minute frequency@25°C			5	min	
Start-up time		To reach 90 % of Final Amplitude and ±150 ppb of 30-Minute Frequency.			100	mS	
Input Current		@60MHz output frequency			80	mA	
Frequency Adjustment Range							
Voltage range			0		3.3	V	
Pullability							See ordering information
Input Z				50		kohm	
Linearity					1	%	
Frequency Stability							
Versus Operating Temperature Range		Measured from Hot to Cold				ppb	See ordering information
Calibration Tolerance		At time of shipment			±5.0	ppb	
Versus supply voltage		5% change			±0.1	ppb	
Versus load		5% change			±0.25	ppb	
Aging							See ordering information
SSB Phase noise (10MHz)		1Hz offset		-80	-74	dBc/Hz	
		10Hz offset		-108	-102	dBc/Hz	
		100Hz offset		-127	-123	dBc/Hz	
		1KHz offset		-148	-145	dBc/Hz	
		10KHz offset		-154	-150	dBc/Hz	
		100KHz offset		-154	-150	dBc/Hz	
Environmental, Mechanical Conditions							
Shock per MIL-STD-202 (Survive)	Method 213, Condition C						
Vibration per MIL-STD-202 (Survive)	Method 204, Condition A						
Operational temperature range	See ordering information						

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Ordering Information

TCXO2525CR-ULG	-	10MHz	-	x	x	x	x	x	x
Group				01	02	03	04	05	06

For example, TCXO2525CR-ULG -10MHz-1-1-2-1-2-1 denotes the TCXO has the following specifications:

Temperature Range: 0°C to +50°C
Stability Over Temperature: ±50ppb
Pullability: ±12.5ppm

ACCEL Sensitivity: 0.25ppb/g
Aging per day: ±2ppb
Aging per 20 years: ±1000ppb

01	Temperature Range
Code	Specification
1	0°C to +50°C
2	-20°C to +70°C
3	-40°C to +85°C
4	-40°C to +105°C

02	Frequency Stability
Code	Spec
1	±50ppb
2	±30ppb
3	±20ppb
4	±10ppb
5	±5ppb

03	Pullability
Code	Specification
1	±6.25ppm
2	±12.5ppm
3	±25ppm
4	±50ppm
5	±100ppm
6	±200ppm
7	±400ppm
8	±1000ppm

04	ACCEL Sensitivity
Code	Spec
1	0.25ppb/g
2	0.10ppb/g
3	0.05ppb/g
4	0.03ppb/g
5	0.01ppb/g
6	0.005ppb/g

05	Aging per day
Code	Spec
1	±3ppb
2	±2ppb
3	±1ppb

06	Aging per 20 years
Code	Spec
1	±1000ppb
2	±500ppb
3	±250ppb
4	±100ppb