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

OCXO2525AW-30.72MHz-A-V
High stability low phase-noise OCXO

Features and Benefits

High stability: ± 10ppb over -10 to+60°C
Low aging rate: ±1ppb/day, ±0.1ppm/year
Output waveform: HCMOS

Typical Applications

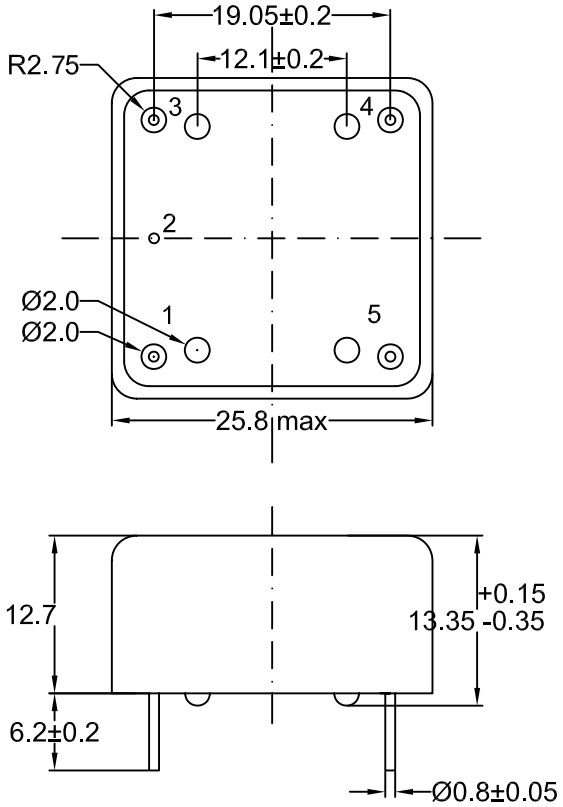
Stratum 3E clock systems
Cellular Base Stations
Instrumentation
Microwave applications
Radar reference

Description

OCXO2525AW-30.72MHz-A-V offers high frequency stability, low long term aging and low phase noise, all in a compact package to suit the different communication needs.

Mechanical Drawing & Pin Connections

Drawing No: **MD130010-1**



Pin connections:

Pin No.	Pin Function
1	Output
2	GND
3	Control Voltage
4	Reference Voltage
5	Supply Voltage

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}			30.72		MHz	
RF Output							
Signal Waveform				HCMOS			
Load	R_L			10kohm//15pF			
H-Level Voltage	V_H		2.4			V	
L- Level Voltage	V_L				0.4	V	
Duty Cycle			45		55	%	
Power Supply							
Reference Voltage VREF Output			2.5		3.1	V	
Supply Voltage	V_S		3.15	3.3	3.45	V	
Warm-up Time	T_{up}	At +25°C to △f/f=1e-7			180	s	ref to freq after 15 min of operation
Power Consumption		Steady state, +25°C			1200	mW	
		Warm-up			3500	mW	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Compliance with 10 years of aging	±0.3			ppm	
EFC voltage	V_c		0		3.1	V	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		ref. 25ºC, air flow 0.5 m/s max.		±10		ppb	
Initial tolerance	(f-f0)/f0	+25ºC, VC=0.5*Vref	±0.01	±0.1		ppm	
Versus supply voltage	V_S	Ref Vcc typ		±0.2		ppb	
G-Sensitivity		Worst direction, 0 – 1kHz vibration BW (for 0 – 2kHz BW consult DEI)	±0.2	±1.0		ppb/G	
Retrace		24h work after 24h off			±10	ppb	
Aging Per Day		After 30 days of operation		±1		ppb	
Aging 1st Year				±0.1		ppm	
Allan Variance		1s	0.5		15	e-12	
SSB Phase noise		1Hz		-80		dBc	
		10Hz		-110		dBc	
		100Hz		-140		dBc	
		1kHz		-152		dBc	
		10kHz		-160		dBc	
		100kHz		-162		dBc	

Environmental,Mechanical Conditions	
Operating temperature range	-10°C to +60°C
Storage temperature range	-60°C to 85°C
Airflow velocity	0.5 m/s maximum
Power voltage	-0.5V to VCC+20%
Control voltage	-0.5V to 6V
Humidity	Hermetically sealed
Mechanical shock	Per MIL-STD-202, 30G half sine pulse, 11ms (500G, 1ms — optionally)
Vibration	Per MIL-STD-202, 10G swept sine 0 to 2000Hz
Soldering conditions	Hand solder only – not reflow compatible. 260ºC 10s (on pins)
Washing conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage