



Features and Benefits

Small package: 25.8x25.8x12.7 mm
Low phase noise: up to -173dBc/Hz
Long term stability: up to 3x10⁻⁸/year
G-sensitivity: up to <4x10⁻¹⁰/g

Typical Applications

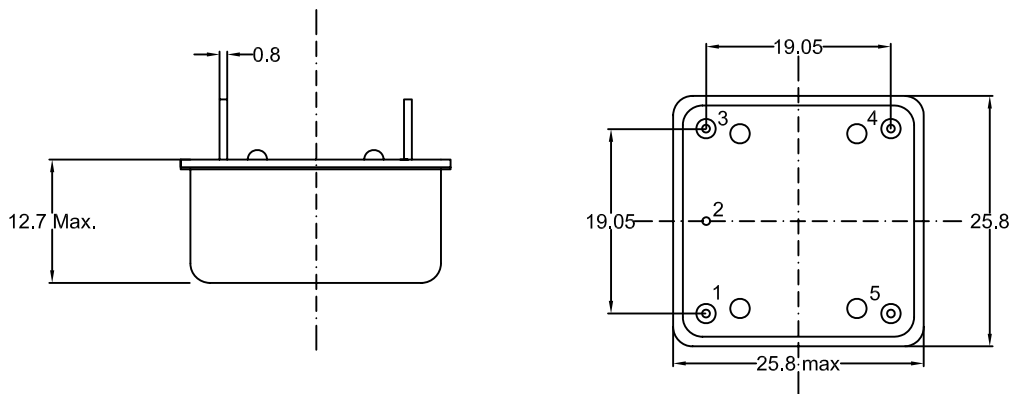
5G, Telecommunication, Test & Measurement

Description

OCXO2525ANLN-10MHz 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: MD180021-5



Pin	Function
1	Output
2	GND
3	Control Voltage
4	Reference Voltage
5	Supply Voltage

Unit in mm
1mm = 0.0394 Inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F _{nom}			10		MHz	
RF Output							
Signal Waveform			Sinewave				
Load	R _L		50±5%			ohm	
Level Voltage	V _H	V _S =12V	600			mV	
		V _S =5V	300			mV	
Harmonics					-30	dBc	
Power Supply							
Warm-up Time	T _{up}	within accuracy of $\pm 2 \times 10^{-8}$ @ 25°C			5	min	
Supply Voltage	V _S	±5%		12		V	
Power Consumption		Steady state, +25°C			170	mA	
		Warm-up			550	mA	
Reference voltage				5		V	
Control voltage range			0		5	V	
Frequency pulling range			0.4			ppm	
Supply Voltage	V _S	±5%		5		V	
Power Consumption		Steady state, +25°C			400	mA	
		Warm-up			1300	mA	
Reference voltage				4.1		V	
Control voltage range			0		4.1	V	
Frequency pulling range			0.3			ppm	
Frequency Stability							
Versus Operating Temperature Range					10	ppb	See ordering information
Versus Load for 12V voltage supply		±5%			1.5	ppb	
Versus supply voltage		±5%			1.5	ppb	
Short term stability (Allan deviation)		per 1 sec			5x10 ⁻¹²		
Environmental, Mechanical Conditions							
Operating temperature range	See ordering information						
Storage temperature range	-55°C to 70°C						
Vibration Frequency	10 to 500Hz						
Vibration Acceleration	5g						
Shock Acceleration	75g						
Shock Duration	3±1ms						
Humidity @ 25°C	98%						



Ordering Information

OCXO2525ANLN	-	10MHz	-	01	02	03	04	05	06
Group				Code					

For example, OCXO2525ANLN -10MHz-1-1-1-1-1-2 denotes the unit has the following specifications:

- Temperature Range: 0°C to +55°C
- Stability Over Temperature: ±5ppb
- Aging: ±10ppb
- Supply voltage: 5V
- G-sensitivity: 1x10⁻⁹/g
- Phase noise: <-100dBc/Hz@1Hz
- <-125dBc/Hz@10Hz
- <-145dBc/Hz@100Hz
- <-160dBc/Hz@1KHz
- <-165dBc/Hz@10KHz

01	Temperature Range
Code	Specification
1	0°C to +55°C
2	-10°C to +60°C
3	-20°C to +70°C
4	-40°C to +70°C
5	-40°C to +85°C

02	Frequency Stability	
Code	Specification	Temperature range code available for
1	±5ppb	1 to 2
2	±10ppb	1 to 5
3	±20ppb	1 to 5
4	±30ppb	1 to 5

03	Aging/year
Code	Specification
1	±10ppb
2	±50ppb
3	±30ppb

04	Supply voltage
Code	Specification
1	5V
2	12V

05	G-Sensitivity
Code	Specification
1	1x10 ⁻⁹ /g
2	5x10 ⁻¹⁰ /g
3	4x10 ⁻¹⁰ /g

06	Phase Noise	
Code	Specification	Note
1	<-95dBc/Hz@1Hz <-125dBc/Hz@10Hz <-145dBc/Hz@100Hz <-165dBc/Hz@1KHz <-173dBc/Hz@10KHz	Only for 12V
2	<-100dBc/Hz@1Hz <-125dBc/Hz@10Hz <-145dBc/Hz@100Hz <-160dBc/Hz@1KHz <-165dBc/Hz@10KHz	
3	<-105dBc/Hz@1Hz <-125dBc/Hz@10Hz <-145dBc/Hz@100Hz <-160dBc/Hz@1KHz <-165dBc/Hz@10KHz	