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

**OCXO2525ANLG-10MHz**
ULTRA PRECISION OCXO

## 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

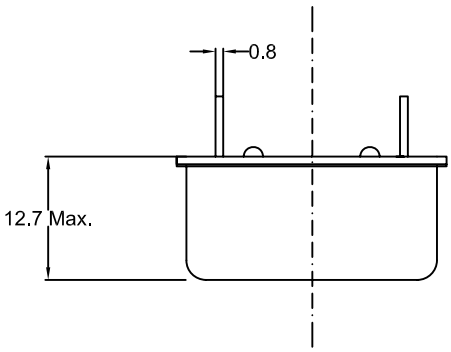
5G, Telecommunication, Test & Measurement

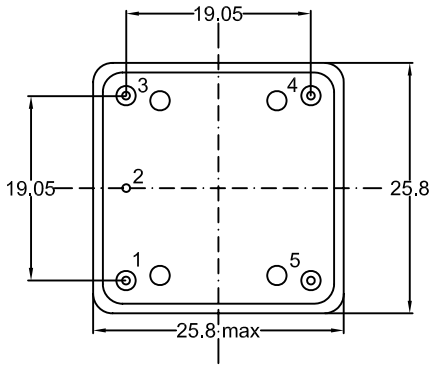
## Description

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**

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## 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 <±2x10$^{-8}$@ 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% | | | | | | |

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## 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<br><-125dBc/Hz@10Hz<br><-145dBc/Hz@100Hz<br><-165dBc/Hz@1KHz<br><-173dBc/Hz@10KHz | Only for 12V |
| 2 | <-100dBc/Hz@1Hz<br><-125dBc/Hz@10Hz<br><-145dBc/Hz@100Hz<br><-160dBc/Hz@1KHz<br><-165dBc/Hz@10KHz | |
| 3 | <-105dBc/Hz@1Hz<br><-125dBc/Hz@10Hz<br><-145dBc/Hz@100Hz<br><-160dBc/Hz@1KHz<br><-165dBc/Hz@10KHz | |