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

**OCXO3317AW-80MHz-6-7-7-2-2**
High stability Low phase-noise miniature OCXO

## Features and Benefits

Frequency range: 80MHz
Supply voltage: 5.0V
Steady current: 40mA Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ±100ppb
Aging: ±0.2ppm per year
Operating temperature: -40°C to +85°C
Size: 16x15.3x9.5mm

## Typical Applications

Portable Wireless Communications Mobile
Test equipment
Synthesizers
Battery Powered Application

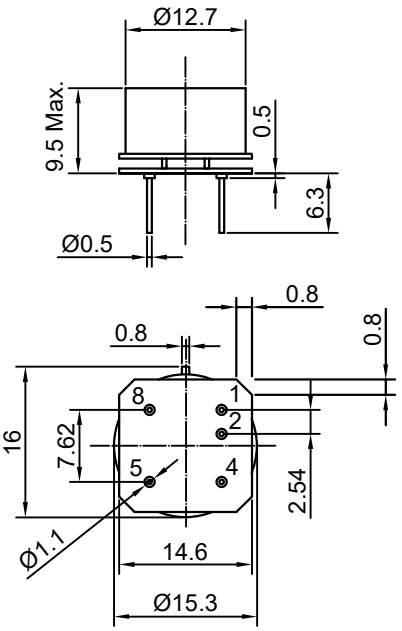
## Description

OCXO3317AW-80MHz-6-7-7-2-2 offers high frequency stability, low long-term aging and low phase noise, all in a compact package to suit the different communication needs.

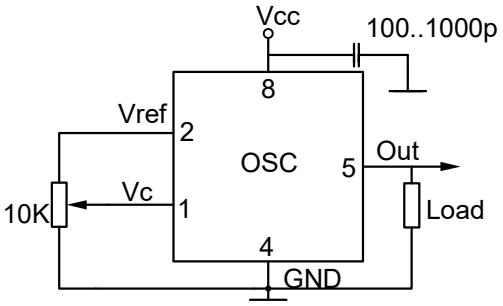
## Mechanical Drawing & Pin Connections

**Drawing No:** MD230038-1

**Physical dimensions**




**Schematic connections**




| Pin | Signal |
|---|---|
| 1 | Electrical tuning |
| 2 | Reference voltage |
| 4 | GND |
| 5 | RF Out |
| 8 | +V Supply |

Unit in mm
1mm = 0.0394 inches

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# Specifications

| Oscillator Specification | Sym | Condition | Value | | | Unit | Note |
|---|---|---|---|---|---|---|---|
| | | | Min. | Typ. | Max. | | |
| Operational Frequency | $f_0$ | | | 80 | | MHz | |
| **RF Output** | | | | | | | |
| Signal Waveform | | | | Sinewave | | | |
| Level | | | +5.0 | +7.0 | | dBm | + |
| Load | | | 45 | 50 | 55 | ohm | |
| Harmonics level | | | | | -25 | dBc | |
| **Power Supply** | | | | | | | |
| Reference Voltage | Vref | | 4.1 | 4.2 | 4.3 | V | |
| Output resistance of Vref | | | | 91 | | ohm | |
| Supply Voltage | Vcc | | 4.75 | 5.0 | 5.25 | V | |
| Warm-up current | | $V_{CC}$=5.0V | 140 | | 220 | mA | |
| Continuous current | | at +25°C, $V_{CC}$=5.0V | | 35 | 40 | mA | |
| Frequency warm-up time | | to df/f=1e-7 at +25°C ref at 1h | | 60 | 90 | sec | |
| **Frequency Adjustment Range** | | | | | | | |
| Electronic Frequency Control (EFC) | $(f_L-f)/f$ | Vc=0 V | | | -1 | ppm | + |
| | (f-f)/f | Vc=Vc0 | | 0 | | ppm | |
| | $(f_H-f)/f$ | Vc=Vref | +1 | | | ppm | + |
| EFC voltage | Vc | | 0 | | 4.2 | V | |
| Input impedance | | | | 11kohm//5pF | | | |
| Input BW | | -3dB level | | 160 | | Hz | |
| Preset control voltage | $V_{C0}$ | disconnected Vc pin | 1.9 | 2.1 | 2.3 | V | |
| **Frequency Stability** | | | | | | | |
| Versus Operating Temperature Range | | ref +25°C | | | ±100 | ppb | + |
| Initial Tolerance @+25°C | $(f-f_0)/f_0$ | $V_C$= $V_{C0}$ | -0.2 | | +0.2 | ppm | + |
| Versus supply voltage | | ref $V_{CC}$ typ. | | | ±5 | ppb | |
| Versus load | | 5% change | | | ±5 | ppb | |
| SSB Phase noise (static values are for reference only and are subject to change.) | | 10Hz | | -95 | | dBc/Hz | |
| | | 100Hz | | -125 | | | |
| | | 1KHz | | -147 | | | |
| | | 10KHz | | -165 | | | |
| | | 100KHz | | -168 | | | |
| Aging Per Day | | After 30 days of operation | | | ±2.0 | ppb | |
| Aging 1st Year | | | | | ±0.2 | ppm | |

| Maximum ratings, environmental, mechanical conditions | |
|---|---|
| Operating temperature range | -40°C to +85°C |
| Storage temperature range | -60°C to +85°C |
| Power voltage | -0.5 to 6.0 V |
| Control voltage | -1.0 to 6.0 V |
| Air flow velocity | 0.5 m/s maximum |
| Humidity | Non-condensing 95% |
| Mechanical shock | Per MIL-STD-202, 30G, 11ms |
| Vibration | RTCA/DO-160,section 8，curve B |
| Soldering conditions | Hand solder only – not reflow compatible 260°C 10s (on pins) |
| Washing conditions | Washing with water or alcohol based detergent allowed only with final enough drying stage |

Note: Included in the test data