



Features and Benefits

- 10MHz Frequency
- 3.3V Supply voltage
- CMOS Output waveform
- ±20ppb Stability Vs -20C ---+70C
- 25x15x9.6mm Size
- 160dBc/Hz @1KHz phase noise value

Typical Applications

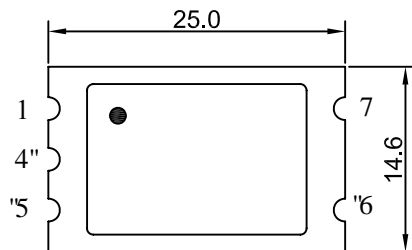
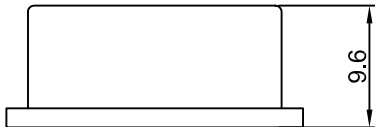
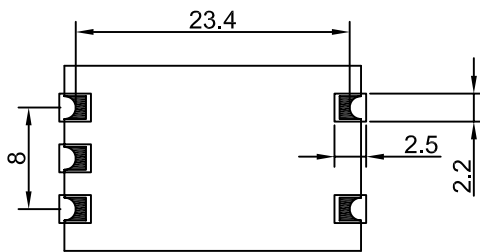
- SATCOM System
- Cellular Base Stations
- Radar Applications

Description

OCXO2515AG-10MHz-A-V are designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: MD180019-1



Pin Connections

| Pin | Symbol | Function |
|-----|--------|-------------------|
| 1 | Vs | Supply Voltage |
| 2 | RF Out | Output |
| 3 | GND | Ground |
| 4 | Vc | Control Voltage |
| 5 | Vref | Reference 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 | | | CMOS | | | | |
| Load | R _L | | 15pf | | | | |
| H-Level Voltage | V _H | | 2.4 | | | V | |
| L- Level Voltage | V _L | | | | 0.3 | V | |
| Duty Cycle | | | 45 | | 55 | % | |
| Rise Time/ Fall Time | | | | | 5 | ns | |
| Power Supply | | | | | | | |
| Supply Voltage | V _S | | 2.97 | 3.3 | 3.63 | V | |
| Warm-up Time | T _{up} | V _c =1.5V, @+25°C, Within ±100ppb of final frequency with reference | | | 2 | min | after 1 hour on |
| Current | | Steady state, +25°C | | | 360 | mA | |
| | | Warm-up | | | 820 | mA | |
| Frequency Adjustment Range | | | | | | | |
| Electronic Frequency Control (EFC) | | V _c =0V | -1.0 | | -0.5 | ppm | |
| | | V _c =1.5V | -100 | | +100 | ppb | |
| | | V _c =3V | +0.5 | | -1.0 | ppm | |
| EFC voltage | V _c | | 0 | 1.5 | 3 | V | |
| Linearity | | | -5 | | +5 | % | |
| Input Impedance | | | 100 | | | kohm | |
| EFC Slope | | | positive | | | | |
| Frequency Stability | | | | | | | |
| Versus Operating Temperature Range | | -20°C --+70°C ref to 25°C | -20 | | +20 | ppb | |
| Initial Frequency Accuracy | | V _c =1.5V/@25°C, after 30mins power on ref to nominal | -0.1 | | +0.1 | ppm | |
| Versus supply voltage | V _S | ±10% change | -20 | | +20 | ppb | |
| Versus load | | ±5% change | -20 | | +20 | ppb | |
| Aging Per Day | | Aging after 30 days of operation | -0.2 | | +0.2 | ppb | |
| Aging 1 st Year | | | -50 | | +50 | ppb | |
| Short Term Stability (in still air) | | after power on 1hour, @25°C | | | 0.01 | ppb/s | |
| Phase noise | | 10Hz | | | -130 | dBc/Hz | |
| | | 100Hz | | | -150 | dBc/Hz | |
| | | 1kHz | | | -160 | dBc/Hz | |
| Environmental, Mechanical Conditions | | | | | | | |
| Operating temperature range | -20°C to 70°C | | | | | | |
| Storage temperature range | -40°C to 105°C | | | | | | |
| RoHS | RoHS compliant | | | | | | |