



Features and Benefits

Frequency range: 40MHz
Supply voltage: 12.0V
Steady state: 1.5W Max
Output waveform: Sinewave
Frequency stability vs. operating temperature: ± 10.0 ppb
Aging: ± 100 ppb per year
Phase noise@100Hz: -130dBc/Hz
Operating temperature: -30°C to +70°C
Size: 25.7x25.7x12.7mm

Typical Applications

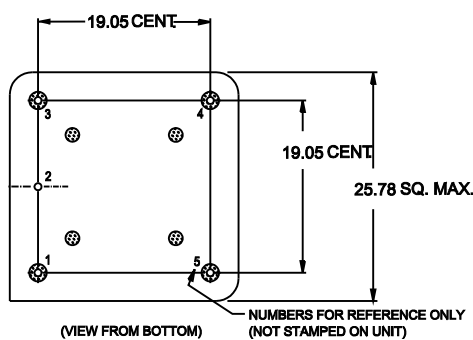
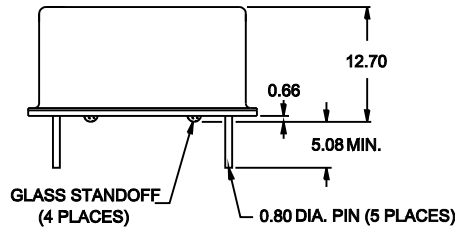
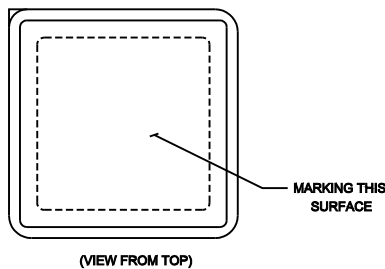
Small Cell, Portable Telecommunication Device
Test and Instrumentation
Synthesizer, Digital switch, Reference Timing Circuit
Packet Timing Protocol ATCOM System

Description

OCXO2525BM-40MHz-B-V is 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: MD240013-1



| PIN CONNECTIONS | |
|-------------------|---|
| PIN | FUNCTION |
| 1 | Output |
| 2 | 0 Volts & Case |
| 3 (See Note 1) | VCO Input or N.C. |
| 4 (See Note 1) | Reference Voltage or N.C. or Oven Monitor |
| 5 | Supply Voltage |

Note 1. If the specification does not specify parameters for either PIN3 or PIN4 then that respective PIN is NOT internally CONNECTED.



Specifications

| Oscillator Specification | Sym | Condition | Value | | | Unit | Note |
|---|---|---|----------|-------|-------|---------|---------------------|
| | | | Min. | Typ. | Max. | | |
| Operational Frequency | F _{nom} | | | 40 | | MHz | |
| RF Output | | | | | | | |
| Waveform | | | Sinewave | | | | |
| Level | | | +5 | | | dBm | |
| Load | | | 50 | | | ohm | |
| Harmonics | | | | | -30 | dBc | |
| Spurious | | | | | -70 | dBc | |
| Power Supply | | | | | | | |
| Supply Voltage | V _s | | +11.4 | +12.0 | +12.6 | V | |
| Steady state | | +25°C | | | 1.5 | W | |
| Current | | @ turn on | | | 400 | mA | |
| Frequency Stability | | | | | | | |
| Versus Operating Temperature Range | | -30°C to +70°C, ref to +25°C | -10 | | +10 | ppb | |
| Initial Frequency Accuracy | | @ +25 ±1°C; after turning on power 15 ±1 minutes; <=90 days following date code | -0.3 | | +0.3 | ppm | |
| Versus supply voltage | | ±5% change | -10 | | +10 | ppb | |
| Versus Load | | ±5% change | -10 | | +10 | ppb | |
| Short Term | | 1 sec | | 0.02 | | ppb/s | Root Allan variance |
| | | 10 sec | | 0.04 | | ppb/10s | |
| Aging Per Day | | after 30 days | -1.0 | | +1.0 | ppb | |
| Aging 1 st Year | | | -100 | | +100 | ppb | |
| Aging 10 Years | | | -0.8 | | +0.8 | ppm | |
| Warm-up | | In 5 minutes @25±1°C | -50 | | +50 | ppb | Reference to 1 hour |
| Phase Noise | | 100Hz | | -130 | | dBc/Hz | |
| Environmental, Mechanical Conditions | | | | | | | |
| Operating temperature range | -30°C to +70°C | | | | | | |
| Storage temperature range | -55°C to +125°C | | | | | | |
| Humidity | MIL-STD-202, Method 103, Test Condition B. 95% RH @ +40°C, non-condensing, 96 hours | | | | | | |
| Vibration (non-operating) | MIL-STD-202, Method 201, 0.06" Total p-p, 10 to 55 Hz | | | | | | |
| Shock (non-operating) | MIL-STD-202, Method 213, Test Condition J. 30g, 11ms, half-sine | | | | | | |