



### Features and Benefits

Frequency range: 200MHz  
Supply voltage: 11.5V  
Steady Power: 1.8W/Max  
Output waveform: Sinewave  
Frequency stability vs. operating temperature: ±50ppb  
Aging: ±200ppb per year  
Phase noise@100KHz: -167dBc/Hz  
Operating temperature: -40°C to +85°C  
Size: 25.8x25.8x12.7mm

### Typical Applications

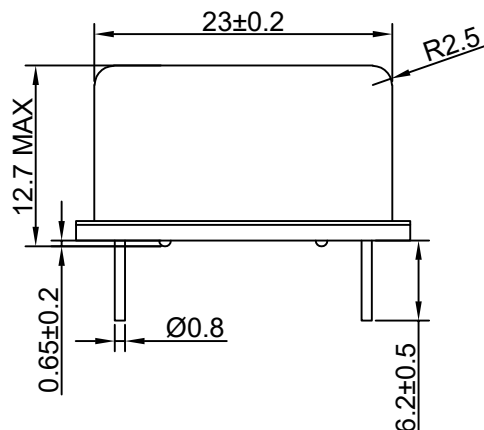
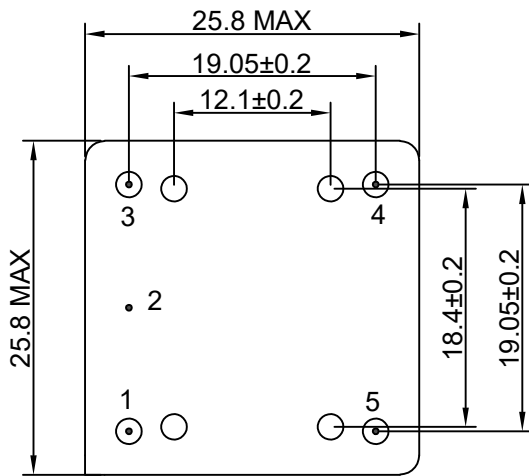
Military Applications  
Airborne, Aircraft, Helicopter  
Radar Systems  
Cargo

### Description

OCXO2525BJ-200MHz-A-V offers a solution for applications with high dynamic phase noise requirements under wide operation temperature.

### Mechanical Drawing & Pin Connections

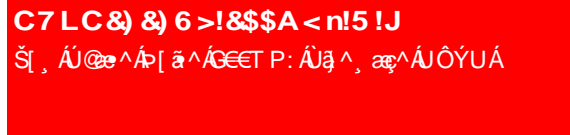
Drawing No: MD24005' -1



#### Pin Connections

| Pin | Function        |
|-----|-----------------|
| 1   | Output          |
| 2   | GND             |
| 3   | Control Voltage |
| 4   | N.C.            |
| 5   | Supply Voltage  |

Unit in mm  
1mm = 0.0394 inches



**Specifications**

| Oscillator Specification                    | Sym             | Condition   | Value     |      |      | Unit  | Note |
|---|-----------------|---|-----------|------|------|-------|------|
|   |                 |   | Min.      | Typ. | Max. |       |      |
| Operational Frequency                       | F <sub>0</sub>  |   |           | 200  |      | MHz   |      |
| <b>RF Output</b>                            |                 |   |           |      |      |       |      |
| Signal Waveform                             |                 |   | Sine wave |      |      |       |      |
| Output Level                                |                 |   | +6        | +8   | +10  | dBm   |      |
| Load  |                 | ±10%  |           | 50   |      | ohm   |      |
| Harmonics level                             |                 |   |           |      | -25  | dBc   |      |
| Sub-Harmonics level                         |                 |   |           |      | -35  | dBc   |      |
| Spurious                                    |                 | 100 Hz to 5 MHz from carrier  |           |      | -75  | dBc   |      |
| <b>Power Supply</b>                         |                 |   |           |      |      |       |      |
| Supply Voltage                              | V <sub>cc</sub> | ±5%   |           | 11.5 |      | V     |      |
| Warm-up Time                                | T <sub>up</sub> | @ +25 °C within ± 5 x 10 <sup>-8</sup> of final frequency after 1 h |           |      | 5    | min   |      |
| Power Consumption                           |                 | Steady state, +25°C   |           |      | 1.8  | W     |      |
|   |                 | Warm-up   |           |      | 4.3  | W     |      |
| <b>Frequency Adjustment Range</b>           |                 |   |           |      |      |       |      |
| Electronic Frequency Control (EFC)          |                 |   | ±2.5      |      |      | ppm   |      |
| EFC voltage                                 | V <sub>c</sub>  |   | 0         |      | 10.0 | V     |      |
| Slope                                       |                 |   | Positive  |      |      |       |      |
| Linearity                                   |                 |   |           |      | 10   | %     |      |
| <b>Frequency Stability</b>                  |                 |   |           |      |      |       |      |
| Versus Operating Temperature Range          |                 | -40°C to +85°C  |           |      | ±50  | ppb   |      |
| Initial Tolerance                           |                 | V <sub>c</sub> = +5.0 V; after power ON for 60 min.                 |           |      | ±200 | ppb   |      |
| Versus supply voltage                       |                 | ±5% change  |           |      | ±5.0 | ppb   |      |
| Versus load                                 |                 | ±10% change   |           |      | ±5.0 | ppb   |      |
| G-Sensitivity (all three axis)              |                 |   |           |      | 1    | ppb/g |      |
| Aging Per Day                               |                 | After 30 days of continuous operation                               |           |      | ±5.0 | ppb   |      |
| Aging 1 <sup>st</sup> Year                  |                 |   |           |      |      | ±200  | ppb  |
| Phase noise                                 |                 | 100Hz   |           |      | -119 | dBc   |      |
|   |                 | 1kHz  |           |      | -139 | dBc   |      |
|   |                 | 10kHz   |           |      | -159 | dBc   |      |
|   |                 | 100kHz  |           |      | -167 | dBc   |      |
| <b>Environmental, Mechanical Conditions</b> |                 |   |           |      |      |       |      |
| Operating temperature range                 |                 | -40°C to +85°C  |           |      |      |       |      |
| Storage temperature range                   |                 | -55°C to +105°C   |           |      |      |       |      |

Test Conditions: TA = +25±3°C, V<sub>c</sub> = 5 Volt unless otherwise identified