## Features

- Ultra Stable
- Wide Temperature Range
- Fast Warming-up

## Applications

- Base Stations
- Instrumentations
- Medical Electronics

## BO2736L Specifications

| Parameter | | Value | | | Unit | Condition | |
|---|---|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | | | |
| Supply Voltage | | – | 5.0 | – | V | | |
| | | – | 12.0 | – | V | | |
| Power Consumption | | – | – | 5.0 | W | During Warming-up | |
| | | – | – | 1.5 | W | Steady at +25℃ & still air | |
| Frequency Range | | 10 ~ 40 | | | MHz | | |
| Nominal Frequency | | 10 | | | MHz | | |
| Initial Frequency Tolerance | | – | – | ±100 | ppb | At shipment, nominal EFC | |
| Freq. Stability Vs. Temp. | | ±1 | – | ±10 | ppb | -20℃ ~ +70℃ | |
| | | ±3 | – | ±10 | ppb | -40℃ ~ +70℃ | |
| | | ±5 | – | ±20 | ppb | -40℃ ~ +85℃ | |
| | | – | – | ±50 | ppb | -55℃ ~ +85℃ | |
| Sine Wave | Output Level | 7 | – | – | dBm | | |
| | Harmonics | – | – | -35 | dBc | | |
| | Spurious | – | – | -70 | dBc | | |
| | Load | – | 50 | – | Ω | | |
| LVTTL | $V_{OH}$ | 2.4 | – | – | V | LVTTL Output, Load=15pf | |
| | $V_{OL}$ | – | – | 0.4 | V | LVTTL Output, Load=15pf | |
| | Duty Cycle | 45 | – | 55 | % | ( $V_{OH}$ - $V_{OL}$)/2 | |
| | Rise/Fall Edge | – | – | 6 | ns | LVTTL Output, Load=15pf | |
| | Load | – | 15 | – | pf | | |
| Short-term Stability(1S) | | – | – | $5\times10^{-12}$ | | Test after 15 Min. | |
| Timing Accuracy | | – | – | 24 | us | Test after 24 Us. | |
| Warm-up Time | | – | – | 10 | Min | At +25℃, with accuracy of ±5ppb | |
| Supply Sensitivity | | – | – | ±5 | ppb | Vcc±5% | |
| Load Sensitivity | | – | – | ±5 | | Load±5% | |
| Aging per Day | | – | – | ±0.5 | | After 30 days of operation | |
| Aging per Year | | – | – | ±50 | | After 30 days of operation | |
| SSB Phase Noise @10MHz | | -125 | – | – | dBc/Hz | Offset 10Hz | @+25℃ |
| | | -145 | – | – | | Offset 100Hz | |
| | | -165 | – | – | | Offset 1kHz | |
| | | -170 | – | – | | Offset 10kHz | |
| | | -170 | – | – | | Offset 100kHz | |
| Control Voltage Range | | 0 | – | 5 | V | | |
| Frequency Turning Range | | ±0.5 | – | ±2.0 | ppm | | |
| Tuning Slope | | Positive | | | | | |

## Environmental Conditions

| | |
|---|---|
| Operating Temperature Range | -55℃～+85℃ |
| Storage Temperature Range | -55℃~+125℃ |



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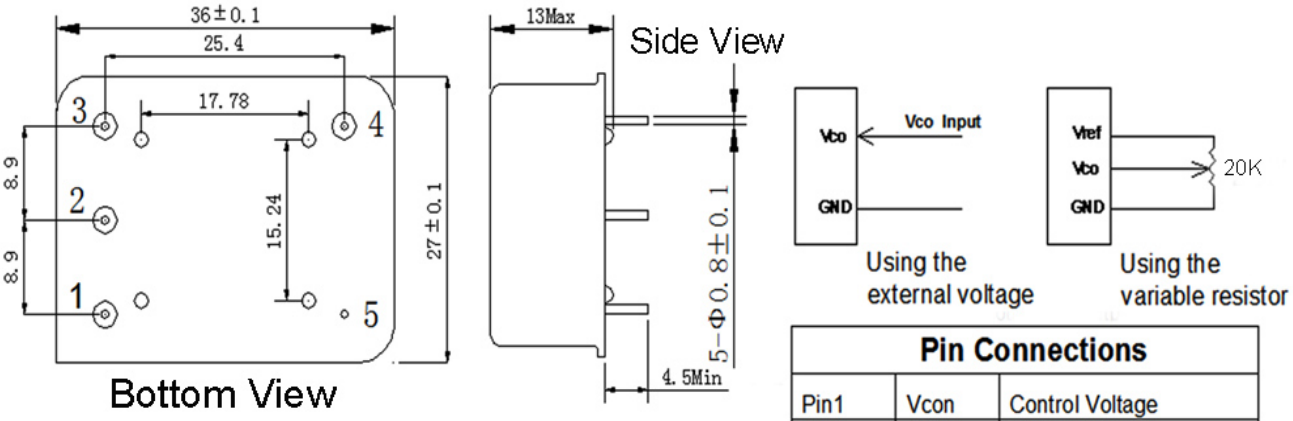
## Reliability

| Parameter | Condition |
|---|---|
| Temperature Stress Test | IEC60068, GJB360B |
| Mechanical Stress Test | IEC60068, GJB360B |
| EMC Test (ESD) | IEC61000, JESD22 |
| Solderability | EIA/JESD22-B102-C |
| RoHS | RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC |

## Outline Dimension & Pin Connections




Note:
1. Leave pin 1 unconnected If Vcon is not used.
2. Leave pin 2 unconnected If Vref is not used.
3. Reference connection of voltage control circiut.

**Pin Connections**

| | | |
|---|---|---|
| Pin1 | Vcon | Control Voltage |
| Pin2 | Vref | Reference Voltage |
| Pin3 | Vdd | Power Supply |
| Pin4 | Fout | Output |
| Pin5 | GND | Ground,Case |

## Ordering Guide

BO 2736 L X X X XXX X XXX.XX

- Product: OCXO
- Outline: 36mm x 27mm
- Freq. Range: L:<50MHz
- Output: S: Sine Wave; H: LVTTL
- Supply Voltage: 1: 12 Vdc; 5: 5 Vdc
- Temp. Range: C: -20℃ ~ +70℃; G: -40℃ ~ +70℃; I: -40℃ ~ +85℃; U: -55℃ ~ +85℃
- Frequency: xx MHz
- Tuning: N: No Tuning; E: ±500ppb
- Phase Noise: G: -145dBc/Hz@1kHz; H: -150dBc/Hz@1kHz; J: -155dBc/Hz@1kHz; K: -160dBc/Hz@1kHz; L: -165dBc/Hz@1kHz
- Temp. Stability: 208: ±20ppb; 108: ±10ppb; 509: ±5ppb; 309: ±3ppb

**Example:** BO2736LH5C509HN10

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