



Features and Benefits

- Frequency range: 10-250MHz
- Supply voltage: 2.5/3.3V
- Steady current: 50mA Max
- Output waveform: CMOS
- Frequency tolerance: ±25ppm
- Pulling range: ±50ppm
- Phase noise@1KHz: -105dBc/Hz
- Operating temperature: -40°C to +85°C
- Size: 5.0x3.2x1.25mm

Typical Applications

- High-speed ethernet
- Fiber channel
- HDTV
- ATM,
- Set-top box
- WiMAX
- Server
- SAS
- SATA

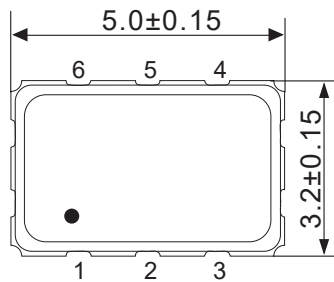
Description

The VCXO5032AL-CMOS is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and frequency stability. These characteristics make it an excellent choice for timing applications.

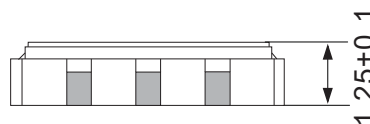
Mechanical Drawing & Pin Connections

Drawing No: MD240046-1

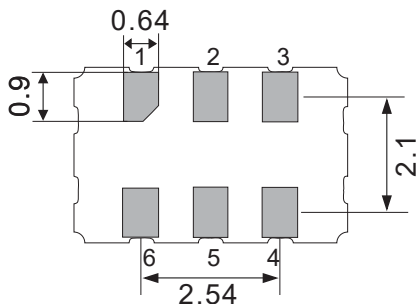
Top View



Side View



Bottom View



| PIN | Function |
|-----|-----------------|
| #1 | Control Voltage |
| #2 | OE/Tri-State |
| #3 | GND |
| #4 | Output |
| #5 | N.C. |
| #6 | Supply Voltage |

Unit in mm
1mm = 0.0394 inches



Specifications

| Oscillator Specification | Sym | Condition | Value | | | Unit | Note |
|---|--------------------------|--------------|---------------------|------------|---------------------|--------|--------------------------|
| | | | Min. | Typ. | Max. | | |
| Frequency Range | F _{nom} | | 10 | | 250 | MHz | |
| RF Output | | | | | | | |
| Signal Waveform | | | CMOS | | | | |
| Load | R _L | | 15 | | | pF | |
| H-Level Voltage | V _H | | 90% V _{cc} | | | V | |
| L- Level Voltage | V _L | | | | 10% V _{cc} | V | |
| Duty Cycle | | | 45 | | 55 | % | |
| Rise/Fall time | | | | | 5 | nS | |
| Power Supply | | | | | | | |
| Supply Voltage | V _{cc} | | | 2.5 3.3 | | V | |
| Start up Time | T _{up} | | | | 2 | mS | |
| Current | | | | | 50 | mA | |
| Frequency Adjustment Range | | | | | | | |
| EFC voltage | | 3.3V 2.5V | 0.3 0.25 | | 3.0 2.25 | V V | |
| Electronic Frequency Control (EFC) | | | ±50 | | | ppm | |
| Input Impedance | | | 1 | | | M Ω | |
| Linearity | | | | | 10 | % | |
| Modulation Bandwidth (BW) | | | 10 | | | KHz | |
| Frequency Stability | | | | | | | |
| Frequency Tolerance | | | | ±25 or ±50 | | ppm | See ordering information |
| RMS phase jitter | | 12KHz-20MHz | | | 1 | pS | |
| Phase noise | | 1KHz | | | -105 | dBc/Hz | |
| Environmental, Mechanical Conditions | | | | | | | |
| Operating temperature range | See ordering information | | | | | | |
| Storage temperature range | -55°C to +125°C | | | | | | |

Ordering Information

| | | | | | | |
|-----------------|---|-------|---|----|----|----|
| VCXO5032AL-CMOS | - | 10MHz | - | x | x | x |
| Group | | | | 01 | 02 | 03 |

For example, VCXO5032AL-CMOS-10MHz-1-1-2 denotes the VCXO has the following specifications:

Frequency: 10MHz
 Temperature Range: -20°C to +70°C
 Frequency Tolerance: ±25ppm
 Supply Voltage: 2.5V

| 01 | Temperature Range |
|------|-------------------|
| Code | Specification |
| 1 | -20°C to +70°C |
| 2 | -40°C to +85°C |

| 02 | Frequency Tolerance |
|------|---------------------|
| Code | Spec |
| 1 | ±25ppm |
| 2 | ±50ppm |

| 03 | Supply Voltage |
|------|----------------|
| Code | Specification |
| 1 | 3.3V |
| 2 | 2.5V |