



Features and Benefits

Frequency range: 10-52MHz
Supply voltage: 2.5/3.3V
Current Consumption: 10mA Max
Output waveform: Clipped Sine or CMOS/TTL
Frequency stability vs. operating temperature: ± 0.5 ppm
Aging per year: ± 1.0 ppm Max
Phase noise@1KHz: -130dBc/Hz
Operating temperature: -40°C to +85°C
Size: 2.05x1.65x0.8mm

Typical Applications

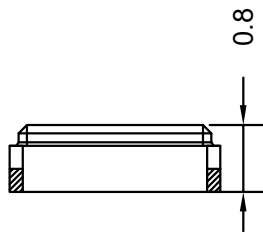
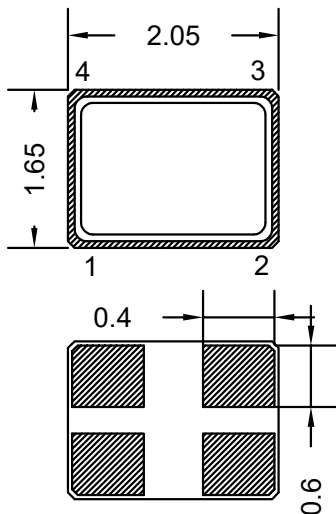
Cellular Base Stations
Instrumentation
Microwave Applications
Radar reference

Description

The TCXO2016AX 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: MD240035-1



| PIN | Function |
|-----|----------------------|
| #1 | Control Voltage/N.C. |
| #2 | GND |
| #3 | Output |
| #4 | 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 | | 52 | MHz | |
| RF Output | | | | | | | |
| Signal Waveform | | | CMOS/TTL | | | | |
| 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 | 50 | 55 | % | |
| Rise/Fall time | | | | 10 | | ns | |
| Power Supply | | | | | | | |
| Signal Waveform | | | Clipped Sinewave | | | | |
| Level | | | 0.8 | | | Vdc | |
| Load | | ±10% | 10Kohm//10pF | | | | |
| Supply Voltage | V _{cc} | | | 2.5, 3.3 | | V | |
| Start up Time | T _{up} | | | 5 | | ms | |
| Current Consumption | | Clipped sine | | | | | |
| | | 10-26MHz | | | 2.0 | mA | |
| | | 26-52MHz | | | 2.5 | mA | |
| | | CMOS/TTL | | | 10 | mA | |
| Frequency Adjustment Range | | | | | | | |
| Electronic Frequency Control (EFC) | | | ±2 or ±5 | | | ppm | |
| EFC voltage | V _c | | 0 | V _{cc} /2 | V _{cc} | V | |
| Input Impedance | | | | 500 | | k Ω | |
| Linearity | | | | 10 | | % | |
| EFC Slope | | | | positive | | | |
| Frequency Stability | | | | | | | |
| Versus Operating Temperature Range | | Reference to +25°C | | ±0.5,±1, ±2 or ±3 | | ppm | |
| Initial Tolerance | | +25°C | | | ±2 | ppm | |
| Aging 1 st Year | | | | | ±1.0 | ppm | |
| SSB Phase noise (26MHz) | | 10Hz | | -80 | | dBc/Hz | |
| | | 100Hz | | -110 | | dBc/Hz | |
| | | 1kHz | | -130 | | dBc/Hz | |
| | | 10kHz | | -145 | | dBc/Hz | |
| | | 100kHz | | -150 | | dBc/Hz | |
| Environmental, Mechanical Conditions | | | | | | | |
| Operating temperature range | | -20°C to +70°C, -40°C to +85°C | | | | | |
| Moisture Sensitivity Level | | 1 | | | | | |