



Features and Benefits

- Very low power consumption(to 0.18W at +25°C)
- DIP14 compatible 9.3mm height packaging
- High frequency stability(up to +/-3ppb over -40°C to +85°C)
- Very fast warming-up 60s typical
- Very low phase noise
- Low aging(0.2ppb/day; 0.02ppm/year)

Typical Applications

- UHF Synthesizers
- SATCOM System
- Portable Microwave Applications

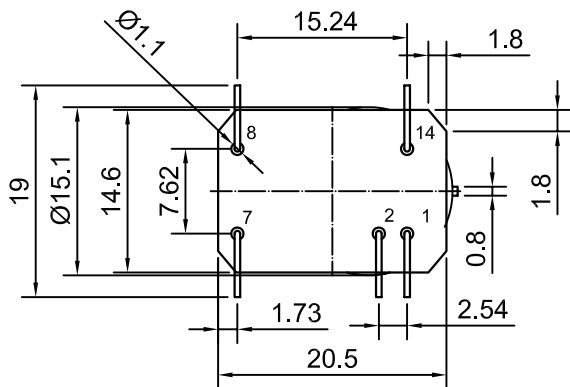
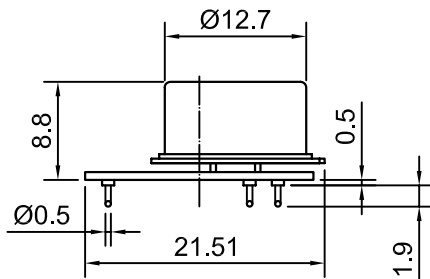
OCXO3308C

OCXO3308C series offers wide temperature operation from -40°C to +85°C with outstanding frequency stability and low phase noise performance all with very fast warm-up and less than 0.18W power dissipation at 25°C.

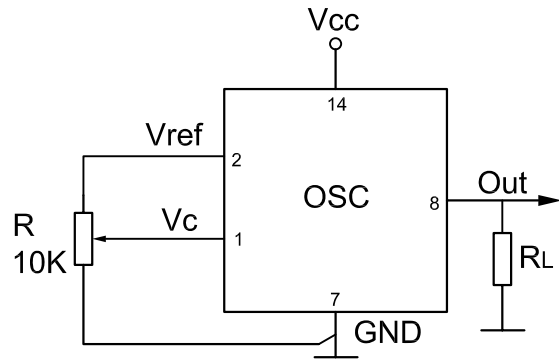
Mechanical Drawing & Pin Connections

Drawing No: MD1(00+*!&

Physical dimensions



Schematic connections



| Pin | Signal |
|-----|-------------------|
| 1 | Electrical tuning |
| 2 | Reference voltage |
| 7 | GND |
| 8 | RF Out |
| 14 | +V Supply |

Unit in mm
 1mm = 0.0394 inches



Specifications

| OCXO Specification | Sym | Condition | Value | | | Unit | Note |
|---------------------------------|---|---|--------|------|---------|--------|----------------------|
| | | | Min. | Typ. | Max. | | |
| Frequency Range | F ₀ | | | 10 | | MHz | |
| RF Output | | | | | | | |
| HCMOS | Load | | 10 | | | Kohm | |
| | H-Level Voltage | V _H | 3.8 | | 10/5 | pF | |
| | L-Level Voltage | V _L | | | 0.4 | V | |
| | Duty Cycle | | 45 | | 55 | % | |
| | Rise/Fall Time | | | | 10/3 | ns | |
| Power Supply | | | | | | | |
| Voltage | V _{cc} | | 4.75 | 5.0 | 5.25 | V | |
| Power Consumption | | Steady-state @ +25°C | | 0.18 | | W | |
| | | Warm-up | | 1.0 | | W | |
| Warm-up Time | | To Δf/f = 1e-7, at 25°C Ref. to frequency after 15min. | | | 60 | s | |
| Frequency Control | | | | | | | |
| Control Voltage | V _c | V _{cc} =5V | 0 | | 4.2 | V | Tuning slop-positive |
| Tuning Range | | | +/-0.5 | +/-1 | | ppm | |
| Reference Voltage | V _{ref} | V _{cc} =5V | 4.1 | 4.2 | 4.5 | V | |
| Frequency Stability | | | | | | | |
| Vs. Operating Temperature Range | | -40°C to +85°C | | | +/-3 | ppb | Ref 25°C |
| Vs. Supply Voltage Change | | Ref. V _{cc} typ. | | +/-2 | | ppb | |
| Vs. Acceleration | | Worst direction | | | +/-1 | ppb/G | |
| Aging | Per day | After 30 days of operation | | | +/-0.2 | ppb | |
| | Per year | | | | +/-0.02 | ppm | |
| Phase Noise | | | | | | | |
| Phase Noise | | @ 1Hz | | -100 | | dBc/Hz | |
| | | @ 10Hz | | -135 | | | |
| | | @ 100Hz | | -159 | | | |
| | | @ 1KHz | | -166 | | | |
| | | @ 10KHz | | -170 | | | |
| | | @ 100KHz | | -170 | | | |
| Environmental | | | | | | | |
| Operating Temperature Range | -40°C to +85°C | | | | | | |
| Storage Temperature Range | -60°C to +90°C | | | | | | |
| Humidity | Non-condensing 95% | | | | | | |
| Mechanical Shock | Per MIL-STD-202, 30G half sine pulse, 11ms | | | | | | |
| Vibration | Per MIL-STD-202, 10G swept sine 10 to 2000Hz | | | | | | |
| Soldering Conditions | Hand solder only – not reflow compatible 260°C 10s(on pins) | | | | | | |