

AT-Cut Crystal - Sinewave - 5.0 Volts

- For high stability STRATUM 2 applications
- Low Jitter
- $< \pm 0.6$ ppm overall frequency tolerance over 15 years
- Full size 14 pin dual-in-line package
- Supply Voltage 5.0 Volts
- AT-Cut Crystal
- EFC (Voltage control) as standard



DESCRIPTION

OC14E5A series oven-controlled crystal oscillators are intended for Stratum 2 applications requiring low jitter and tight stability < 0.6 ppm overall frequency tolerance over 15 years.

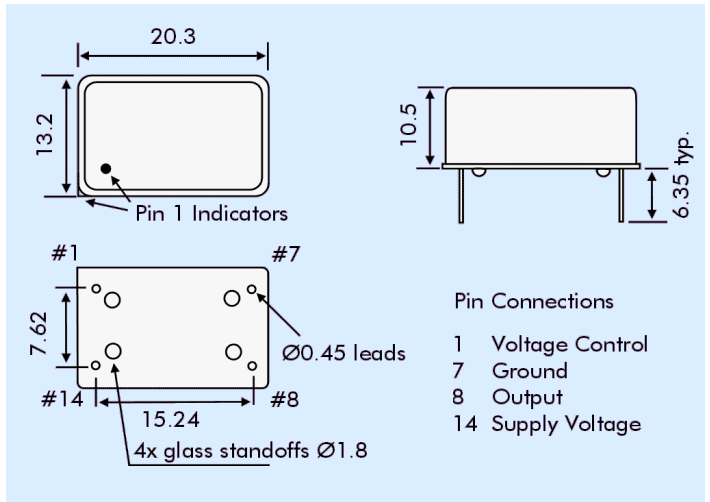
SPECIFICATION

| | |
|--------------------------------|---|
| Crystal Cut: | AT-cut |
| Output Waveform: | Sinewave |
| Supply Voltage: | +5.0 VDC ± 0.2 V |
| Frequency Range: | 1.25MHz to 100.0MHz |
| Initial Calibration Tolerance: | ± 0.5 ppm maximum |
| Frequency Stability | |
| over 0° to +60°C: | ± 0.2 ppm typical ± 0.07 ppm available |
| over -20° to +70°C: | ± 0.3 ppm typical ± 0.15 available ± 0.25 ppm available |
| over -40° to +85°C: | ± 0.5 ppm typical ± 0.25 ppm available |
| vs. Voltage Change: | < 0.1 ppm for ± 0.2 V change |
| vs. Ageing: | ± 0.7 ppm first year $< \pm 4$ ppm over 10 years |
| vs. Load Change: | < 0.01 ppm for $\pm 5\%$ change |
| Warm-up Time: | 3 minutes maximum |
| Voltage Control | |
| Control Voltage Centre: | +2.5 Volts (V _{CON}) |
| Freq. Deviation Range: | ± 4.0 ppm min., ref. to 25°C |
| Control Voltage Range: | 0V to +5.0Volts |
| Transfer Function: | Positive: Increasing control voltage increases output frequency. |
| Input Impedance: | 47k Ω minimum |
| EFC Linearity: | $\pm 10\%$ maximum |
| Power Dissipation: | 1.5W max. at steady state 2.5W max. at turn on |
| Output | |
| Output Level: | +3dBm (typ.) into 50 Ω load |
| Harmonics: | -10dBc minimum |
| Spurious: | -70dBc minimum |
| Environmental | |
| Storage Temperature: | -65° to +125°C |
| Shock: | 2000g, 0.3ms $\frac{1}{2}$ sine |
| Vibration: | 10 ~2000Hz / 10g |

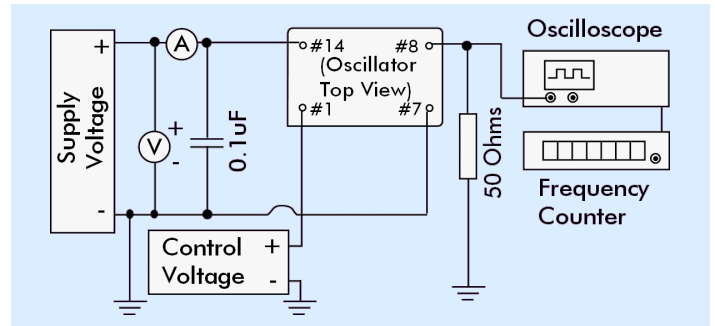
PHASE NOISE (at 10MHz)

| Offset | dBc/Hz |
|--------|--------|
| 1Hz | -80 |
| 10Hz | -110 |
| 100Hz | -135 |
| 1kHz | -145 |
| 10kHz | -150 |

OUTLINE & DIMENSIONS



TEST CIRCUIT



PART NUMBER FORMAT

Example: **OC14GE5A-10.000-0.15/-20+70**

