

AT-Cut Crystal - Sine Wave - 12.0 Volts

- Frequency Range 10.0MHz to 100.0MHz
- 25.4 x 25.4 x 16.0mm 5 pin metal, solder-sealed package
- Supply Voltage 12.0 Volts
- AT-Cut Crystal
- Sine Wave Output
- EFC (Voltage control) as standard



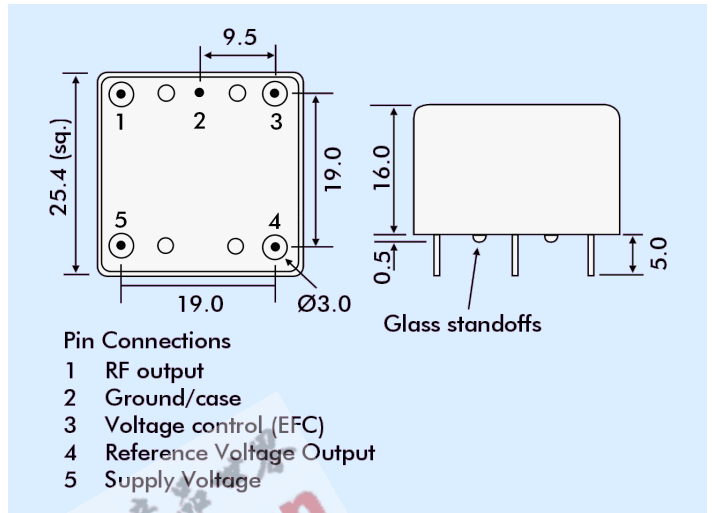
DESCRIPTION

OC11E12A series oven-controlled crystal oscillators are close tolerance OCXOs with good phase noise performance.

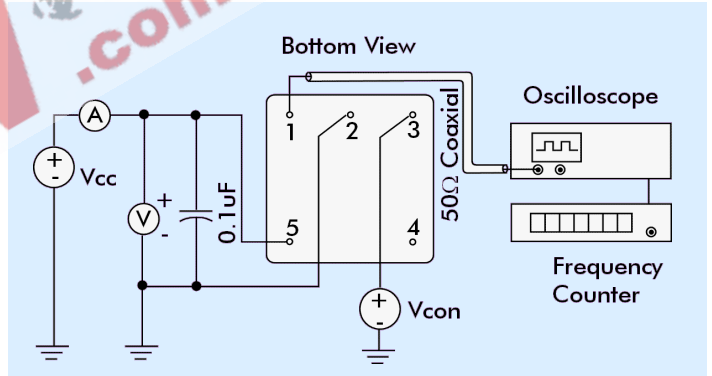
SPECIFICATION

| | |
|--------------------------------|---|
| Crystal Cut: | AT-cut |
| Output Waveform: | Sine Wave |
| Supply Voltage: | +12.0 VDC $\pm 0.2V$ |
| Frequency Range: | 10.0MHz to 100.0MHz |
| Initial Calibration Tolerance: | $\pm 0.5ppm$ max. (at $V_{CON} + 2.5V$) |
| Frequency Stability | |
| over 0° to +60°C: | $\pm 0.05ppm$ |
| over -20° to +70°C: | $\pm 0.1ppm$ |
| over -40° to +85°C: | $\pm 0.2ppm$ |
| vs. Voltage Change: | $< \pm 20ppb$ for $\pm 5\%$ change |
| vs. Ageing: | $\pm 5.0ppb$ max per day $\pm 0.5ppm$ per first year $\pm 3.0ppm$ over 10 years |
| vs. Load Change: | $< \pm 20ppb$ for $\pm 5\%$ change |

OUTLINE & DIMENSIONS

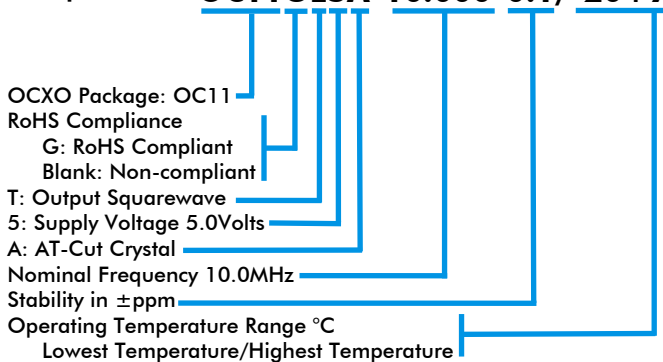


TEST CIRCUIT



PART NUMBER FORMAT

Example: **OC11GE5A-10.000-0.1/-20+70**



Warm-up Time: 3 minutes max. to within $\pm 0.5ppm$ of nominal freq.

| | |
|-------------------------|---|
| Voltage Control | |
| Control Voltage Centre: | +2.5 Volts (V_{CON}) |
| Freq. Deviation Range: | $\pm 5.0ppm$ min., $\pm 20ppm$ max. ref. to 25°C and O.T.R. |
| Control Voltage Range: | 2.5V ± 2.0 Volts |
| Transfer Function: | Positive: Increasing control voltage increases output frequency |
| Input Impedance: | 100k Ω minimum |
| EFC Linearity: | $\pm 10\%$ maximum |

Power Dissipation: 1.0W max. steady state
3.0W max. at turn on

| | |
|--------------------|---|
| Output | |
| Level: | +3dBm typ., +8dBm max into 50 Ω load |
| Harmonic: | -30dBc min. |
| Spurious: | -75 dBm min. |
| Reference Voltage: | +4.0 ± 0.3 VDC or custom |

| | |
|----------------------|---------------------------------|
| Environmental | |
| Storage Temperature: | -55° to +125°C |
| Shock: | 2000g, 0.3ms $\frac{1}{2}$ sine |
| Vibration: | 10 ~2000Hz / 10g |

PHASE NOISE (at 10MHz)

| Offset | dBc/Hz |
|--------|--------|
| 1Hz | -75 |
| 10Hz | -100 |
| 100Hz | -130 |
| 1kHz | -140 |
| 10kHz | -150 |