

AT-Cut Crystal - Square Wave - 5.0 Volts

- Frequency Range 1.25MHz to 100.0MHz
- 25.4 x 25.4 x 16.0mm 5 pin metal, solder-sealed package
- Supply Voltage 5.0 Volts
- AT-Cut Crystal
- Squarewave Output
- EFC (Voltage control) as standard



DESCRIPTION

OC11T5A series oven-controlled crystal oscillators are close tolerance OCXOs with good phase noise performance.

SPECIFICATION

| | |
|--------------------------------|--|
| Crystal Cut: | AT-cut |
| Output Waveform: | Square Wave |
| Supply Voltage: | +5.0 VDC ± 0.2 V |
| Frequency Range: | 1.25MHz to 100.0MHz |
| Initial Calibration Tolerance: | ± 0.5 ppm max. (at $V_{CON} + 2.5$ V) |
| Frequency Stability | |
| over 0° to +60°C: | ± 0.05 ppm |
| over -20° to +70°C: | ± 0.1 ppm |
| over -40° to +85°C: | ± 0.2 ppm |
| vs. Voltage Change: | $< \pm 20$ ppb for $\pm 5\%$ change |
| vs. Ageing: | ± 5.0 ppb max per day ± 0.5 ppm per first year ± 3.0 ppm over 10 years |
| vs. Load Change: | $< \pm 20$ ppb for $\pm 5\%$ change |

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

Voltage Control

| | |
|-------------------------|---|
| Control Voltage Centre: | +2.5 Volts (V_{CON}) |
| Freq. Deviation Range: | ± 5.0 ppm min., ± 20 ppm 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

| | |
|--------------------|--|
| Load: | 15pF HCMOS |
| Output Logic HIGH: | +4.5V minimum |
| Output Logic LOW: | 0.5V maximum |
| Duty Cycle: | 50% $\pm 10\%$ |
| Rise/Fall Time: | 5ns max (20%~80%) Frequency dependant |

Reference Voltage: +4.0 ± 0.3 VDC or custom

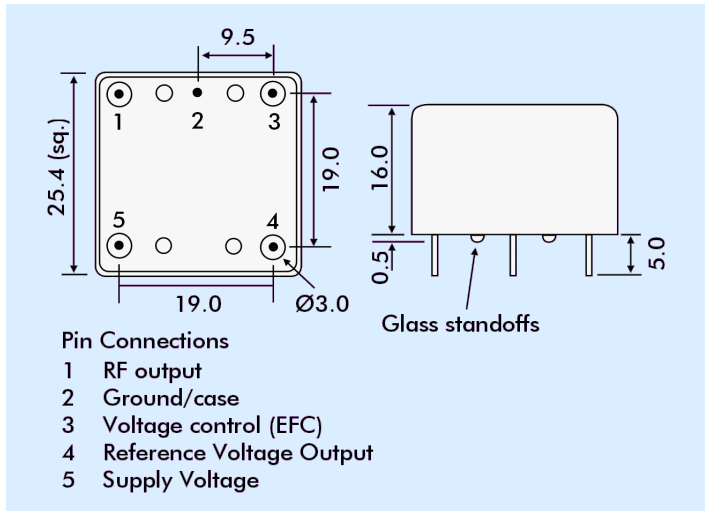
Environmental

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

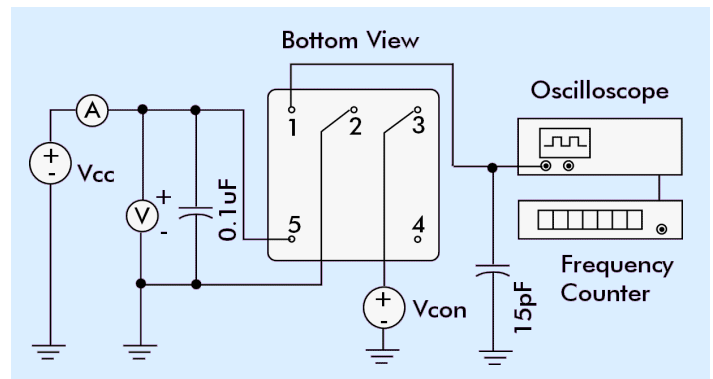
PHASE NOISE (at 10MHz)

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

OUTLINE & DIMENSIONS



TEST CIRCUIT



PART NUMBER FORMAT

Example: **OC11GT5A-10.000-0.1/-20+70**

