OCXO - OC14T5A SERIES

AT-Cut Crystal - Square Wave - 5.0 Volts

- **For high stability STRATUM 2 applications**
- **Low Jitter**
- **<±0.6ppm 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

OC14T5A series oven-controlled crystal oscillators are intended for Stratum 2 applications requiring low jitter and tight stability <0.6ppm overall frequency tolerance over 15 years.

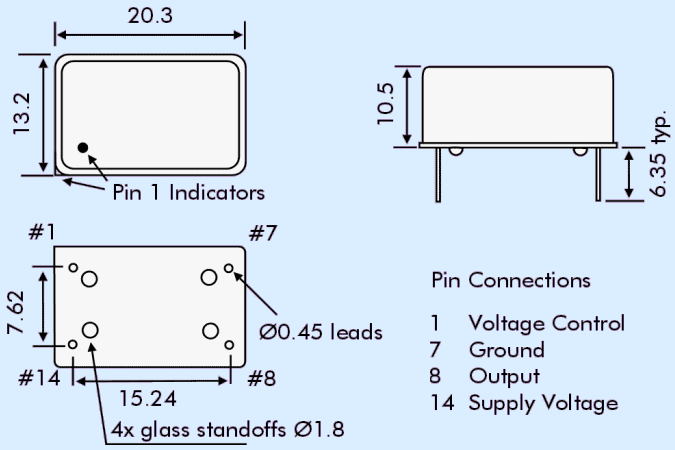
SPECIFICATION

Crystal Cut:	AT-cut
Output Waveform:	Square Wave
Supply Voltage:	+5.0 VDC ±0.2V
Frequency Range:	1.25MHz to 100.0MHz
Initial Calibration Tolerance:	±0.5ppm maximum
Frequency Stability	
over 0° to +60°C:	±0.2ppm typical ±0.025ppm available
over -20° to +70°C:	±0.3ppm typical ±0.05 available
over -40° to +85°C:	±0.5ppm typical ±0.1ppm available
vs. Voltage Change:	<0.1ppm for ±0.2V change
vs. Ageing:	±0.7ppm first year <±4ppm over 10 years
vs. Load Change:	<0.01ppm for ±5% change
Warm-up Time:	3 minutes maximum
Voltage Control	
Control Voltage Centre:	+2.5 Volts (V_{CON})
Freq. Deviation Range:	±4.0ppm min., ref. to 25°C
Control Voltage Range:	0V to +5.0Volts
Transfer Function:	Positive: Increasing control voltage increases output frequency.
Input Impedance:	47kΩ minimum
EFC Linearity:	±10% maximum
Power Dissipation:	1.5W max. at steady state 2.5W max. at turn on
Output	
Load:	10 LS or 47pF
Output Logic HIGH:	+4.5V minimum
Output Logic LOW:	0.4V maximum
Duty Cycle:	50%±10%
Rise/Fall Time:	7ns max (20%~80%) *Frequency dependant*
Envionmental	
Storage Temperature:	-65° to +125°C
Shock:	2000g, 0.3ms ½ sine
Vibration:	10 ~2000Hz / 10g

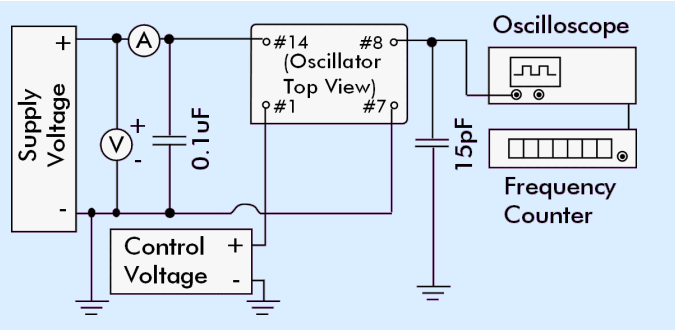
PHASE NOISE (at 10MHz)

Offset	dBc/Hz
1Hz	-70
10Hz	-100
100Hz	-130
1kHz	-140
10kHz	-145

OUTLINE & DIMENSIONS



TEST CIRCUIT



PART NUMBER FORMAT

Example: **OC14GT5A-10.000-0.05/-20+70**

OCXO Package: OC14
RoHS Compliance
G: RoHS Compliant
Blank: Non-compliant
T: Output Squarewave
5: Supply Voltage 5.0Volts
A: AT-Cut Crystal
Nominal Frequency 10.0MHz
Stability in ppm
Operating Temperature Range °C
Lowest Temperature/Highest Temperature

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