

## 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.

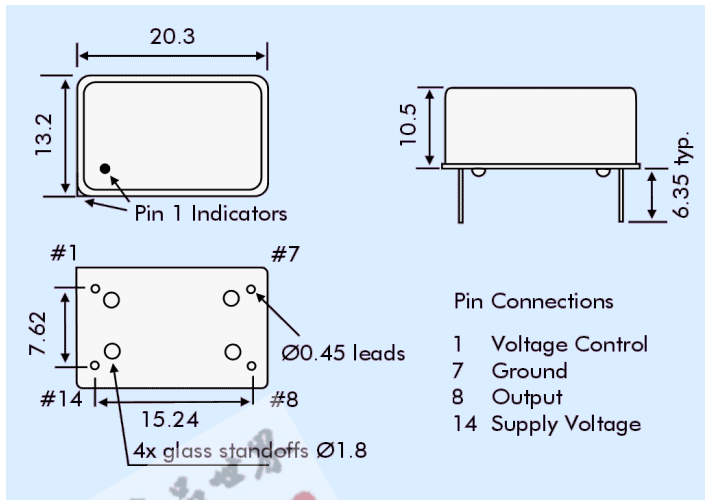
### SPECIFICATION

Crystal Cut:	AT-cut
Output Waveform:	Sinewave
Supply Voltage:	+5.0 VDC $\pm 0.2$ V
Frequency Range:	1.25MHz to 100.0MHz
Initial Calibration Tolerance:	$\pm 0.5$ ppm maximum
Frequency Stability	
over 0° to +60°C:	$\pm 0.2$ ppm typical $\pm 0.07$ ppm available
over -20° to +70°C:	$\pm 0.3$ ppm typical $\pm 0.15$ available $\pm 0.25$ ppm available
over -40° to +85°C:	$\pm 0.5$ ppm typical $\pm 0.25$ ppm available
vs. Voltage Change:	$< 0.1$ ppm for $\pm 0.2$ V change
vs. Ageing:	$\pm 0.7$ 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:	$\pm 4.0$ 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 $\Omega$ 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 $\Omega$ 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

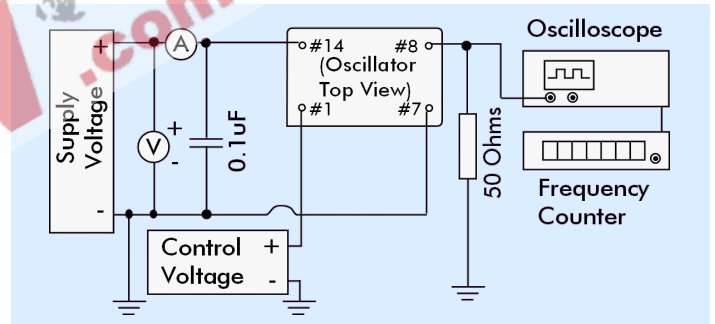
### OUTLINE & DIMENSIONS



#### Pin Connections

- 1 Voltage Control
- 7 Ground
- 8 Output
- 14 Supply Voltage

### TEST CIRCUIT



### PART NUMBER FORMAT

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

