# **EURO**QUARTZ

# **OCXO - OC14E12A**

## AT-Cut Crystal OCXO - Sinewave - 12.0 Volts

### 10.0MHz

- 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 12.0 Volts .
- **AT-Cut Crystal**
- EFC (Voltage control) as standard •

#### DESCRIPTION

OC14E12A 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.

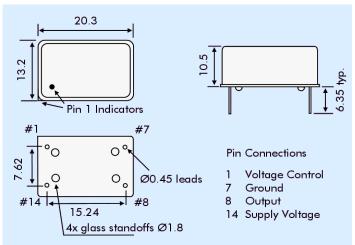
#### **SPECIFICATION**

Crystal Cut:		AT-cut
Output Waveform:		Sinewave
Supply Voltage:		+12.0 VDC ±0.5V
Frequency Range:		10.0MHz
Initial Calibration Tolerance:		±0.5ppm maximum
Frequency Stability		
	over 0° to +60°C:	±0.2ppm typical
		±0.05ppm available
	over -20° to +70°C:	±0.3ppm typical
		±0.1ppm available
	over -40° to +85°C:	±0.5ppm typical
		±0.2ppm available
	vs. Voltage Change:	<0.1ppm for ±0.5V change
	vs. Ageing:	±0.7ppm first year
		<±4ppm over 10 years
	vs. Load Change:	$<0.01$ ppm for $\pm5\%$ change
Warm-up Time:		3 minutes maximum
Voltage	Control	
· ····g·	Control Voltage Centre:	+2.5 Volts (VCON)
	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:		1.0W max. at steady state 2.0W max. at turn on
Output		
	Output Level:	+3dBm (typ.) into 50 $\Omega$ load
	Harmonics:	-10dBc minimum
	Spurious:	-70dBc minimum
	-1	
Envionmental		
	Storage Temperature:	-65° to +125°C
	Shock:	2000g, 0.3ms ½ sine
	Vibration:	10 ~2000Hz / 10g

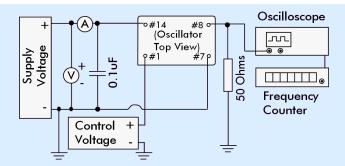
#### PHASE NOISE (at 10MHz)

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

#### **OUTLINE & DIMENSIONS**



**TEST CIRCUIT** 



#### PART NUMBER FORMAT OC14GE12A-10.000-0.10/-20+70 **Example:** OCXO Package: OC14 **RoHS** Compliance G: RoHS Compliant Blank: Non-compliant E: Output Sinewave 12: Supply Voltage 12.0Volts A: AT-Cut crystal Nominal Frequency 10.0MHz Stability in ppm Operating Temperature Range °C Lowest Temperature/Highest Temperature

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