

- Frequency Range 10.0MHz to 100.0MHz
- 20.3 x 20.3 x 10.5mm 5 pin metal, solder-sealed package
- Supply Voltage 12.0 Volts
- SC-Cut Crystal
- True Sinewave Output
- EFC (Voltage control) as standard



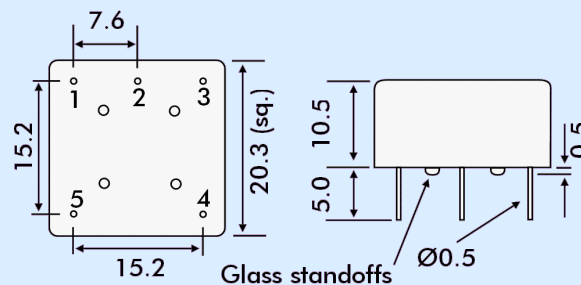
### DESCRIPTION

OC18E12S series oven-controlled crystal oscillators are close tolerance OCXOs with excellent phase noise performance.

### SPECIFICATION

Crystal Cut:	SC-cut
Output Waveform:	Sine Wave
Supply Voltage:	+12.0 VDC $\pm$ 0.5V
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:	$\pm$ 0.01ppm
over -20° to +70°C:	$\pm$ 0.01ppm
over -40° to +85°C:	$\pm$ 0.03ppm
vs. Voltage Change:	<20ppb for $\pm$ 5% change
vs. Ageing:	$\pm$ 2.0ppb max per day $\pm$ 0.1ppm per first year $\pm$ 0.5ppm over 10 years
vs. Load Change:	<20ppb for $\pm$ 5% change
Warm-up Time:	1 minute max. to within $\pm$ 0.1ppm of nominal freq.
Voltage Control	
Control Voltage Centre:	+2.5 Volts ( $V_{CON}$ )
Freq. Deviation Range:	$\pm$ 0.5ppm min., $\pm$ 2ppm max. ref. to 25°C and O.T.R.
Control Voltage Range:	2.5V $\pm$ 2.0Volts
Transfer Function:	Positive: Increasing control voltage increases output frequency.
Input Impedance:	100k $\Omega$ minimum
EFC Linearity:	$\pm$ 10% maximum
Power Dissipation:	200mA max. steady state 500mA max. at turn on

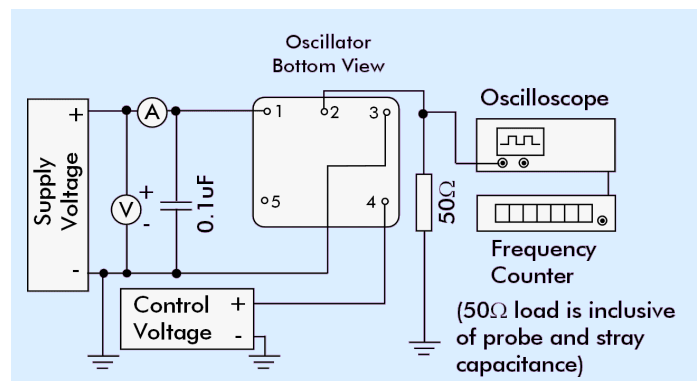
### OUTLINE & DIMENSIONS



#### Pin Connections

- 1 Supply Control
- 2 RF Output
- 3 Ground/case
- 4 Voltage Control EFC
- 5 Reference Voltage Output

### TEST CIRCUIT



### PART NUMBER FORMAT

Example: **OC18GE12S-10.000-0.01/-20+70**

OCXO Package: OC18

RoHS Compliance

G: RoHS Compliant

Blank: Non-compliant

E: Output Sine Wave

12: Supply Voltage 12.0Volts

S: SC-Cut Crystal

Nominal Frequency 10.0MHz

Stability in ppm

Operating Temperature Range °C

Lowest Temperature/Highest Temperature

### PHASE NOISE (at 10MHz)

Offset	dBc/Hz
1Hz	-85
10Hz	-120
100Hz	-140
1kHz	-145
10kHz	-150