OCXO - OC18E5S SERIES

SC-Cut Crystal - Sine Wave - 5.0 Volts

- **Frequency Range 10.0MHz to 100.0MHz**
- **20.3 x 20.3 x 10.5mm 5 pin metal, solder-sealed package**
- **Supply Voltage 5.0 Volts**
- **SC-Cut Crystal**
- **True Sinewave Output**
- **EFC (Voltage control) as standard**

DESCRIPTION

OC18E5S series oven-controlled crystal oscillators are close tolerance OCXOs with excellent phase noise performance.

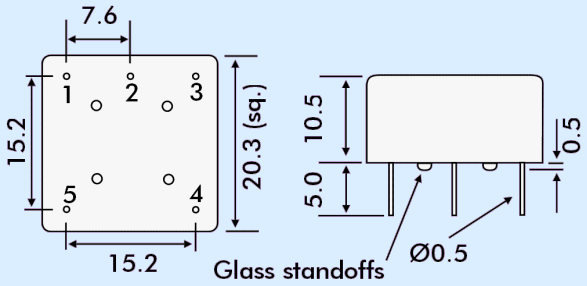
SPECIFICATION

Crystal Cut:	SC-cut
Output Waveform:	Sine Wave
Supply Voltage:	+5.0 VDC ±0.2V
Frequency Range:	10.0MHz to 100.0MHz
Initial Calibration Tolerance:	±0.5ppm max. (at Vcon 2.5V)
Frequency Stability	
over 0° to +60°C:	±0.01ppm
over -20° to +70°C:	±0.01ppm
over -40° to +85°C:	±0.03ppm
vs. Voltage Change:	<±20ppb for ±5% change
vs. Ageing:	±2.0ppb max per day ±0.1ppm per first year ±0.5ppm over 10 years
vs. Load Change:	<±20ppb for ±5% change
Warm-up Time:	1 minute max. to within ±0.1ppm of nominal freq.
Voltage Control	
Control Voltage Centre:	+2.5 Volts (Vcon)
Freq. Deviation Range:	±0.5ppm min., ±2ppm max. ref. to 25°C and O.T.R.
Control Voltage Range:	2.5V ±2.0Volts
Transfer Function:	Positive: Increasing control voltage increases output frequency.
Input Impedance:	100kΩ minimum
EFC Linearity:	±10% maximum
Power Dissipation:	200mA max. steady state 500mA max. at turn on
Output	
Output Level:	+3dBm typ., +8dBM max. into 50Ω load.
Harmonics:	-30dBc min.
Spurious:	-75dBc min.
Reference Voltage:	+4.0±0.3VDC or custom
Envionmental	
Storage Temperature:	-55° to +125°C
Shock:	2000g, 0.3ms ½ sine
Vibration:	10 ~2000Hz / 10g

PHASE NOISE (at 10MHz)

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

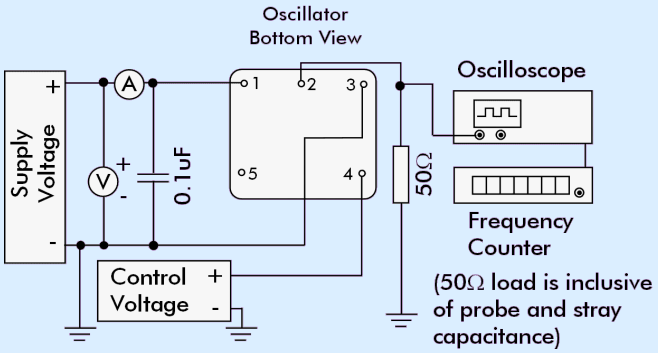
OUTLINE & DIMENSIONS



Pin Connections

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

TEST CIRCUIT



(50Ω load is inclusive of probe and stray capacitance)

PART NUMBER FORMAT

Example: **OC18GE5S-10.000-0.01/-20+70**

OCXO Package: OC18
RoHS Compliance
G: RoHS Compliant
Blank: Non-compliant
E: Output Sine Wave
5: Supply Voltage 5.0Volts
S: SC-Cut Crystal
Nominal Frequency 10.0MHz
Stability in ppm
Operating Temperature Range °C
Lowest Temperature/Highest Temperature

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