

AT-Cut Crystal - Square Wave - 5.0 Volts

- Frequency Range 5.0MHz to 20.0MHz
- 50.8 x 50.8 x 16.0mm 7 pin metal, solder-sealed package
- Supply Voltage 5.0 Volts
- AT-Cut Crystal
- Squarewave Output
- EFC (Voltage control) as standard

DESCRIPTION

OC22T5A series oven-controlled crystal oscillators are close tolerance OCXOs with good phase noise performance.

SPECIFICATION

Crystal Cut:	AT-cut
Output Waveform:	Square Wave
Supply Voltage:	+5.0 VDC \pm 0.2V
Frequency Range:	5.0MHz to 20.0MHz
Initial Calibration Tolerance:	\pm 0.1ppm max.(at V_{CON} +2.5V)
Frequency Stability	
over 0° to +60°C:	\pm 0.05ppm
over -20° to +70°C:	\pm 0.1ppm
over -40° to +85°C:	\pm 0.2ppm
vs. Voltage Change:	$<$ \pm 1.0ppb for \pm 5% change
vs. Ageing:	\pm 3.0ppb max per day \pm 0.5ppm per first year \pm 3.0ppm over 10 years
vs. Load Change:	$<$ \pm 1.0ppb for \pm 5% change

Warm-up Time: 1 minutes max. to within \pm 0.2ppm of nominal freq.

Voltage Control

Control Voltage Centre:	+2.5 Volts (V_{CON})
Freq. Deviation Range:	\pm 5.0ppm min., \pm 20ppm 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 Ω minimum
EFC Linearity:	\pm 10% maximum

Power Dissipation: 2.0W max. steady state
6.0W max. at turn on

Output

Load:	15pF HCMOS
Output Logic HIGH:	+4.5V minimum
Output Logic LOW:	0.5V maximum
Duty Cycle:	50% \pm 10%
Rise/Fall Time:	5ns max (20%~80%) Frequency dependant

Reference Voltage: +4.0 \pm 0.3VDC or custom

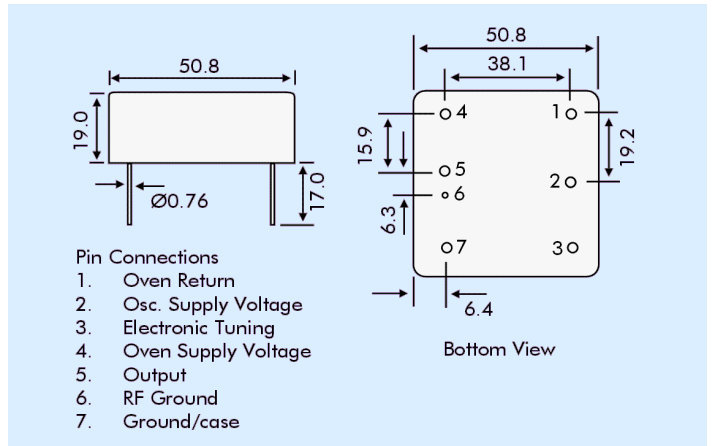
Environmental

Storage Temperature:	-55° to +125°C
Shock:	2000g, 0.3ms $\frac{1}{2}$ sine
Vibration:	10 ~2000Hz / 10g

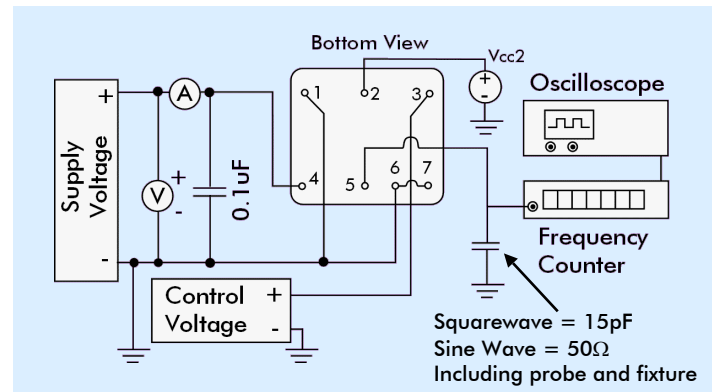
PHASE NOISE (at 10MHz)

Offset	dBc/Hz
1Hz	-75
10Hz	-100
100Hz	-130
1kHz	-140
10kHz	-150

OUTLINE & DIMENSIONS



TEST CIRCUIT



PART NUMBER FORMAT

Example: **OC22GT5A-10.000-0.10/-20+70**

