

SQXO-2AT OSCILLATOR

500 kHz to 120 MHz

DESCRIPTION

STATEK's SQXO-2AT crystal oscillator consists of a TTL and CMOS-compatible hybrid circuit and a miniature AT quartz crystal packaged in a hermetically-sealed 3-pin TO-39 package.

FEATURES

- CMOS and TTL compatible
- Low EMI emission
- Wide temperature range
- Full military testing available
- Hermetically sealed

APPLICATIONS

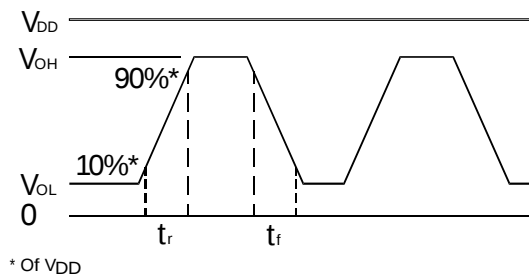
Industrial, Computer & Communications

- General purpose clock oscillator

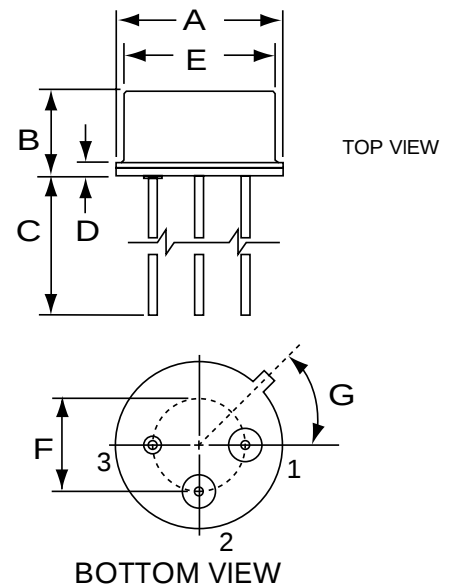
Military & Aerospace

- Airborne hybrid computer
- Flight recorder

OUTPUT WAVE FORM



PACKAGE DIMENSIONS



DIM	INCHES	mm
A	0.380 MAX.	9.65 MAX.
B	0.185 MAX.	4.70 MAX.
C	0.500 MIN.	12.70 MIN.
D	0.029	0.74
E	0.326 MAX.	8.28 MAX
F	0.200 REF.	5.08 REF.
G	45°	45°

Note:

1. All metal parts gold plated
2. Leads are 0.019 in.[0.48mm] MAX.

10128 - Rev D



SPECIFICATIONS

Specifications are typical at 25°C unless otherwise noted.
Specifications are subject to change without notice.

Supply Voltage (V_{DD})	5V $\pm$ 10% (3.3V available)
Calibration	A: $\pm$ 0.01% (100ppm)
Tolerance*	B: $\pm$ 0.03%
	C: $\pm$ 0.1%
Frequency Stability*/** (at 5V)	0°C to +50°C from $\pm$ 5 to $\pm$ 30ppm -10°C to +70°C from $\pm$ 10 to $\pm$ 50ppm -40°C to +85°C from $\pm$ 20 to $\pm$ 100ppm -55°C to +125°C from $\pm$ 30 to $\pm$ 100ppm
Supply Current	10 mA for 50 MHz 8 mA for 40 MHz 6 mA for 30 MHz 4 mA for 24 MHz
Start-up Time	5 msec. MAX.
Rise/Fall Time	3 nsec. Typ., 6 nsec. MAX.
Duty Cycle*	40% Min., 60% MAX.
Aging, first year	10 ppm MAX.
Shock, survival***	1,000g peak .3 msec., 1/2 sine
Vibration survival	10g rms 10-2000 Hz random
Operating Temperature****	-10°C to +70°C Commercial -40°C to +85°C Industrial -55°C to +125°C Military

* Tighter tolerances available for calibration, stability and duty cycle.

** Does not include calibration tolerance.

*** High shock version available.

**** Consult factory for operating temperatures above 125°C.

Note: All parameters are measured at ambient temperature
with a 10M Ω and 15pF load at 5V

ABSOLUTE MAXIMUM RATINGS

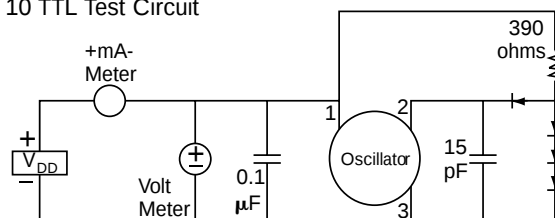
Supply Voltage V_{DD}	-0.3V to 7.0V
Storage Temperature	-55°C to +125°C
Maximum Process Temp.	260°C, 10 seconds

PIN CONNECTIONS

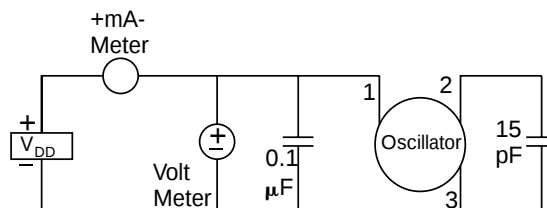
1. V_{DD}
2. Output
3. Ground

TEST CIRCUITS

(1) 10 TTL Test Circuit



(2) HCMOS Test Circuit



PACKAGING

SQXO-2AT - Tray Pack (Standard)

HOW TO ORDER SQXO-2AT CRYSTAL OSCILLATORS

SQXO-2AT	S	32 MHz	(	100ppm	/	100ppm	/	200ppm	/	I	)
	"S" if special or custom design. Blank if Std.	Frequency		Calibration Tolerance* @ 25°C (A) (B) (C)		Frequency Stability over Temp. Range		Total Frequency Tolerance		Temp. Range: C = Commercial I = Industrial M = Military S = Specialty	

* Other calibration fill in ppm