



SQXO-2 OSCILLATOR

10 kHz to 2 MHz

DESCRIPTION

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

FEATURES

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

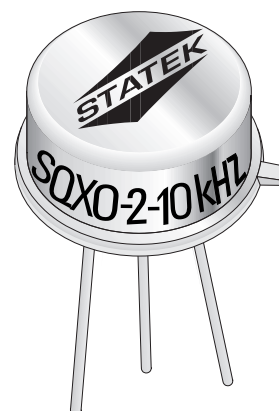
APPLICATIONS

Industrial, Computer & Communications

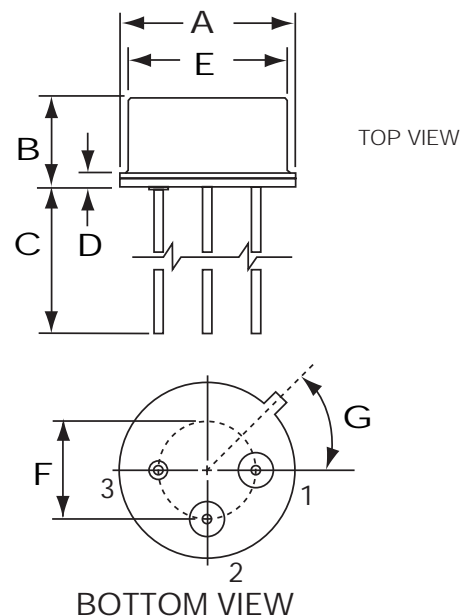
- General purpose clock oscillator
- MWD (measurement while drilling)

Military & Aerospace

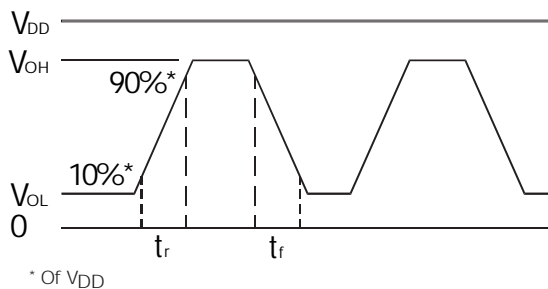
- Airborne hybrid computer
- Flight recorder



PACKAGE DIMENSIONS



OUTPUT WAVE FORM



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.

10131 - Rev C



SPECIFICATIONS

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

Supply Voltage (V _{DD})	5V ± 10% (3.3V available)
Calibration Tolerance*	A: ± 0.01% (100ppm) B: ± 0.03% C: ± 0.10%
Supply Current	Figure 1
Turning Point (T _O)**	Figure 2
Temp. Coefficient (k)	-0.035 ppm/°C ²
Duty Cycle*	40% Min., 60% MAX.
Rise/Fall Time	0.2 μsec. MAX.
Aging, first year	10 ppm MAX.
Shock, survival	
Above 600 kHz	750g peak .3 msec., 1/2 sine
Below 600 kHz	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.

** Other turning point available.

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

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

ABSOLUTE MAXIMUM RATINGS

Supply Voltage V _{DD}	-0.5V 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

PACKAGING

SQXO-2 - Tray Pack (Standard)

FIGURE 1.
TYPICAL SUPPLY CURRENT (mA) @ 5V

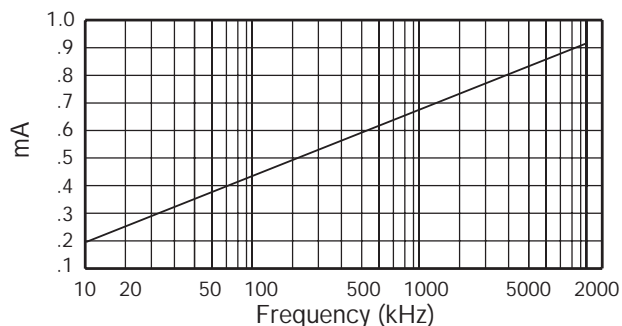
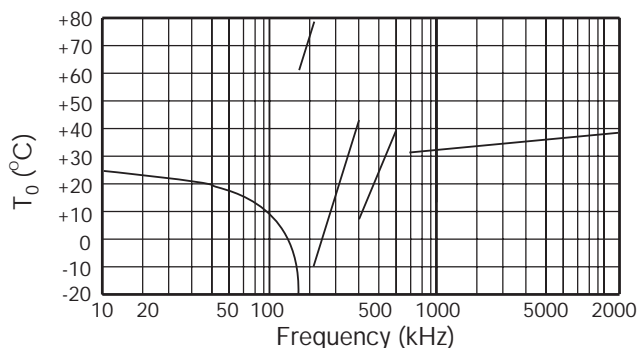


FIGURE 2.
TYPICAL TURNING POINT TEMPERATURE (T_O)



Note: Frequency (f) deviation from frequency (f₀) @ turning point

$$\text{temperature } (T_O): \frac{f-f_0}{f_0} = k(T-T_O)^2$$

HOW TO ORDER SQXO-2 CRYSTAL OSCILLATORS

SQXO-2	S	10 kHz	(A	/	I)
	"S" if special or custom design. Blank if Std.	Frequency		Calibration Tolerance* @25°C (A) (B) (C)		Temp. Range: C = Commercial I = Industrial M = Military S = Specify	

*Other calibration fill in ppm

Frequencies other than 32.768 kHz

A: ± 0.01%

B: ± 0.03%

C: ± 0.1%

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