

ISSUE 1; March 2016

Description

- Statek's high shock HFXO oscillators, available in tight frequency tolerances, consist of a Statek miniature quartz crystal and a CMOS/TTL compatible hybrid circuit in a ceramic package. Each crystal used in the HFXO oscillator is pre-qualified before assembly through electrical tests and characterization over temperature.
- A-SM1 5000G, Gold Plated (lead free)
- A-SM5 5000G, Solder Dipped (lead free)
- B-SM1 10000G, Gold Plated (lead free)
- B-SM5 10000G, Solder Dipped (lead free)
- C-SM1 20000G, Gold Plated (lead free)
- C-SM5 20000G, Solder Dipped (lead free)
- D-SM1 30000G, Gold Plated (lead free)
- D-SM5 30000G, Solder Dipped (lead free)
- F-SM1 50000G, Gold Plated (lead free)
- F-SM5 50000G, Solder Dipped (lead free)
- G-SM1 75000G, Gold Plated (lead free)
- G-SM5 75000G, Solder Dipped (lead free)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- | | |
|---------------------|-------------------------|
| Frequency | 220.0kHz to 100.0MHz |
| Frequency Tolerance | ±10.00ppm to ±100.00ppm |
| Tolerance Condition | @ 25°C |
| Frequency Stability | ±10.00ppm to ±100.00ppm |
| Ageing | ±5ppm max in 1st year |

Electrical Parameters

- Supply Voltage 2.5V ±5%
- Absolute Maximum Supply Voltage: -0.5V to 7.0V
Note: the supply voltage range is -0.5V to 4.0V for some products.

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C
- 55 to 125°C

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

Environmental Parameters

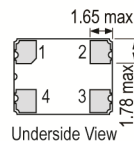
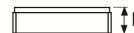
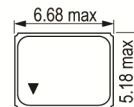
- Shock: 0.5ms, 1/2 sine up to 75000G
- Vibration: 20G, 10Hz-2000Hz, swept sine
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Maximum Process Temperature: 260°C for 20 seconds max

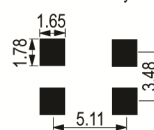


Outline (mm) -A-SM1 = 5000G, Gold Plated (lead free)



Pad Connections	Height (H) =
1. EN/TS/NC	SM1 1.73mm max
2. GND	SM3 1.91mm max
3. Output	SM5 1.91mm max
4. +Vs	

Solder Pad Layout



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Ordering Information

- Minimum required*
 - Frequency*
 - Model*
 - Termination Variant*
 - Output Compatibility
 - Frequency Tolerance (@25°C)*
 - Frequency Stability (over operating temperature range)*
 - Operating Temperature Range*
 - Pad 1 Function*
 - Shock Requirement*
- Example
 - 40.0MHz HFXO 2.5V-A-SM1
 - CMOS $\pm 10\text{ppm}$ $\pm 20\text{ppm}$ -10 to 70C NC
- Shock Level Options:
 - A = 5000G
 - B = 10000G
 - C = 20000G
 - D = 30000G
 - F = 50000G
 - G = 75000G
- Termination Options:
 - SM1 = Gold plated
 - SM3 = Solder Dipped (non RoHS)
 - SM5 = Solder Dipped (Pb free)

Compliance

- RoHS Status (2011/65/EU) Optional
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Tray Supplied on a tray
Pack Size: 1
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Electrical Specification - maximum limiting values 2.5V $\pm 5\%$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
220.00kHz	100.0MHz	-10 to 70	± 10.0	-	10	40/60%
		-40 to 85	± 20.0	-	10	40/60%
		-55 to 125	± 40.0	-	10	40/60%

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