

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.



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

### 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 3.3V ±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

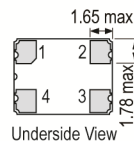
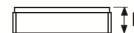
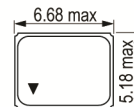
- Output Compatibility CMOS
- Drive Capability 15pF

### Environmental Parameters

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

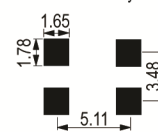
### Manufacturing Details

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



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 3.3V-A-SM1
  - CMOS ±10ppm ±20ppm -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 3.3V ±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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