

ISSUE 1; April 2016

Description

- The HGXO crystal oscillator is a surface-mount oscillator that can survive extremely high shocks - up to 100,000G. The design consists of a hermetically-sealed high-shock crystal and a CMOS compatible integrated circuit housed in a 7.5 x 5mm SMD ceramic package.
- A-SM1 5000G, Gold Plated (RoHS)
- A-SM5 5000G, Solder Dipped (RoHS)
- B-SM1 10000G, Gold Plated (RoHS)
- B-SM5 10000G, Solder Dipped (RoHS)
- C-SM1 20000G, Gold Plated (RoHS)
- C-SM5 20000G, Solder Dipped (RoHS)
- D-SM1 30000G, Gold Plated (RoHS)
- D-SM5 30000G, Solder Dipped (RoHS)
- F-SM1 50000G, Gold Plated (RoHS)
- F-SM5 50000G, Solder Dipped (RoHS)
- G-SM1 75000G, Gold Plated (RoHS)
- G-SM5 75000G, Solder Dipped (RoHS)
- H-SM1 100000G, Gold Plated (RoHS)
- H-SM5 100000G, Solder Dipped (RoHS)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 460.0kHz to 50.0MHz
- Frequency Tolerance $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Tolerance Condition @ 25°C
- Frequency Stability $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 5\text{ppm}$ typ in the 1st year
- Note: Frequency Stability does not include the Frequency Tolerance @ 25°C

Electrical Parameters

- Supply Voltage 5.0V $\pm 10\%$
- Absolute Maximum Supply Voltage: -0.5V to 7.0V

Operating Temperature Ranges

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

Output Details

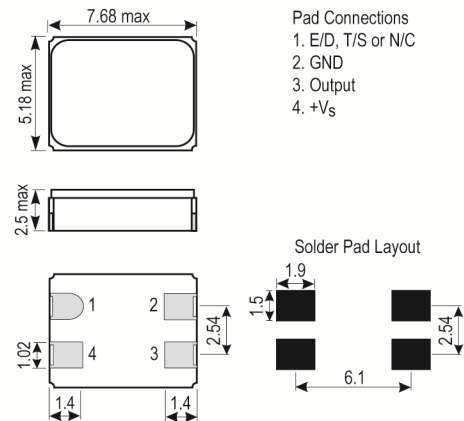
- Output Compatibility CMOS
- Drive Capability 15pF
- Note: TTL loads and higher CMOS loads are available - please contact an IQD Sales Office

Output Control

- Enable/Disable or Tri-State Options (EN/TS):
Logic '1' to pad 1, output enabled
Logic '0' to pad 1, output disabled, output goes to high impedance state
(EN version, internal oscillator stops, low current)
(TS version, internal oscillator operates, fast output recovery)
- Option NC:
No internal connection to pad 1 (no EN or TS function)
- Start-Up Time: 5ms max



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



Sales Office Contact Details:

UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

Environmental Parameters

- Shock: Shock Requirement, 0.5ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz swept sine
- Note: Random vibration testing also available - please contact an IQD Sales Office
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Maximum Process Temperature: 260°C for 20s

Ordering Information

- Frequency*
Model*
Supply Voltage
Shock Requirement*
Termination Variant*
Output Compatibility
Frequency Tolerance (@25°C)*
Frequency Stability (over operating temperature range)*
Operating Temperature Range*
Pad 1 Function*
(*minimum required)
- Shock Level Options:
Code A = 5000G
Code B = 10000G
Code C = 20000G
Code D = 30000G
Code F = 50000G
Code G = 75000G
Code H = 100000G
- Termination Variants:
SM1 = Gold Plated
SM5 = Solder Dipped
(Note: non-RoHS compliant terminations are available - please contact an IQD Sales Office)
- Example
32.0MHz HGXO 5.0V D-SM1
CMOS ±100ppm ±100ppm -40 to 80C NC

Compliance

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

Packaging Details

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

Sales Office Contact Details:

UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

Electrical Specification - maximum limiting values 5.0V \pm 10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
460.00kHz	50.0MHz	-10 to 70	\pm 10.0	-	6	40/60%
		-40 to 85	\pm 20.0	-	6	40/60%
		-55 to 125	\pm 40.0	-	6	40/60%

This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

Sales Office Contact Details:

UK: +44 (0)1460 270200

Germany: 0800 1808 443

France: 0800 901 383

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com