



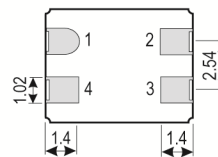
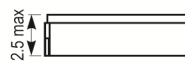
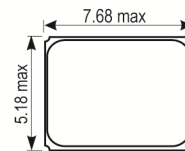
ISSUE 1; September 2014 - RoHS 2011/65/EU

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)
- FEATURES:
Mechanical shock survivability up to 100000G
CMOS output, TTL on request
Optional Output Enable/Disable with Tri-State
Low EMI emission
Full military testing to MIL-PRF-55310 available
Low acceleration sensitivity available
- APPLICATIONS:
Industrial -
Transmitter reference oscillator
Clock oscillator
Military & Aerospace -
Smart Munitions
Projectile Electronics

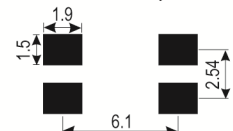


Outline (mm)



- Pad Connections
1. E/D, T/S or N/C
 2. GND
 3. Output
 4. +Vs

Solder Pad Layout



Frequency Parameters

- Frequency 460.0kHz to 50.0MHz
- Frequency Tolerance ±10.00ppm to ±100.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±10.00ppm to ±40.00ppm
- Ageing ±5ppm typ in the 1st year
- Note: Frequency Stability does not include Frequency Tolerance @ 25°C

Electrical Parameters

- Supply Voltage 3.3V ±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

Sales Office Contact Details:

UK: +44 (0)1460 270200

France: +33 (0)5 34 50 91 18

Email: info@iqdfrequencyproducts.com

Germany: +49 (0) 30 408 192 300

USA: +1 408.273.4530

Web: www.iqdfrequencyproducts.com



Output Control

- Start-Up Time: 5ms max
- Enable/Disable (EN option):
Logic '1' to pad 1 enables oscillator output
Logic '0' to pad 1 disables the oscillator output, when disabled the output goes to the high impedance state (very low current, internal oscillator stops)
No connection to pad 1 enables oscillator output
When pad 1 changes from logic 0 to logic 1, output recovery is delayed
- Tri-State (TS option):
Logic '1' to pad 1 enables oscillator output
Logic '0' to pad 1 disables the oscillator output, when disabled the output goes to the high impedance state (low current)
No connection to pad 1 enables oscillator output
When pad 1 changes from logic 0 to logic 1, output recovery is immediate
- No Connection (NC option): Pad 1 not connected internally, no enable/disable or tri-state function

Environmental Parameters

- Shock: 0.5 ms, 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 20sec

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
50.0MHz HGXO 3.3V 5000G D-SM1
CMOS ±10ppm ±100ppm -40 to 85C NC

Sales Office Contact Details:

UK: +44 (0)1460 270200

France: +33 (0)5 34 50 91 18

Email: info@iqdfrequencyproducts.com

Germany: +49 (0) 30 408 192 300

USA: +1 408.273.4530

Web: www.iqdfrequencyproducts.com



Compliance

- RoHS Status 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 ±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	±10.0	-	6	40/60
		-40 to 85	±20.0	-	6	40/60
		-55 to 125	±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

France: +33 (0)5 34 50 91 18

Email: info@iqdfrequencyproducts.com

Germany: +49 (0) 30 408 192 300

USA: +1 408.273.4530

Web: www.iqdfrequencyproducts.com