



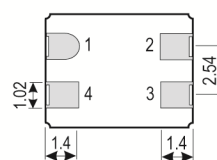
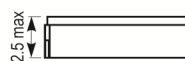
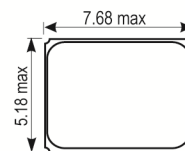
ISSUE 1; September 2014 - RoHS 2011/65/EU

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)

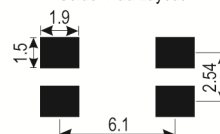


Outline (mm)



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

Solder Pad Layout



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

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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 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

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**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

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