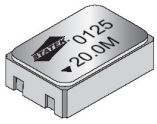
EUROQUARTZ

HGXO OSCILLATORS

High Shock SMD Crystal Oscillator 460kHz to 50MHz

FEATURES



- **Frequency Range 460kHz to 50MHz**
- **Mechanical shock survivability up to 100,000g**
- **Supply voltage from 0.9V to 5.0Volts available**
- **Low EMI emission**
- **Hermetically sealed package**
- **Low acceleration sensitivity available**
- **Full MIL testing to MIL-PRF-55310 available**
- **SM1 and SM5 versions are pB free**

DESCRIPTION

HGXO oscillators are miniature, surface mount units 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 SMD 7.5mm x 5.0mm ceramic package.

SPECIFICATION

Specifications are typical at 25°C unless otherwise indicated. Tighter specifications are available, contact Euroquartz technical sales.

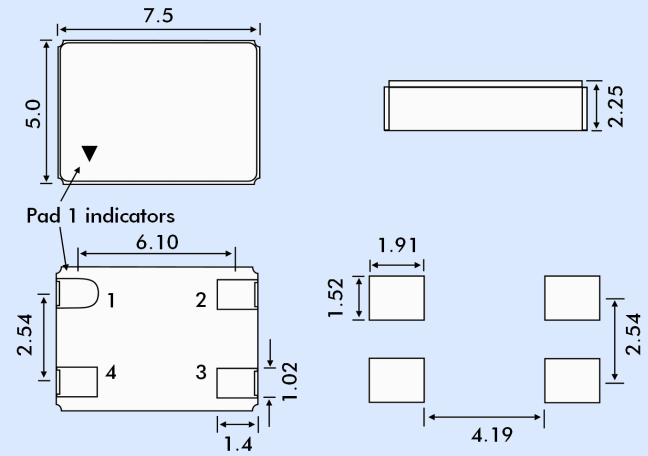
Supply Voltage:	+0.9V to +5.0 Volts
Calibration Tolerance:	From ±10ppm
Frequency Stability over Operating Temperature Range**	
Commercial (0° ~ +70°C):	From ±10ppm
Industrial(-40° ~ +85°C):	From ±20ppm
Military (-55° ~ +125°C):	From ±40ppm
Total Frequency Tolerance**	
Commercial (0° ~ +70°C):	From ±15ppm
Industrial(-40° ~ +85°C):	From ±20ppm
Military (-55° ~ +125°C):	From ±50ppm
Output Load:	15pF *(Higher loads available)*
Rise and Fall Time:	6ns maximum
Duty Cycle:	60/40%
Shock Survival:	Up to 100,000g, 0.5ms, ½ sine
Vibration Survival***:	20g, 10~2000Hz swept sine
Maximum Process Temperature:	260°C for 20 seconds

* *Does not include calibration tolerance.*
** *Frequency over temperature relative to nominal frequency.*
*** *per MIL-STD-202G Method 204D, Condition D. Random testing is also available*

PACKAGING OPTIONS

HGXO oscillators are available either tray packed (<250pcs) or tape and reel (>250 pieces).
16mm tape, 178mm or 330mm reels (EIA 418).

OUTLINE & DIMENSIONS



Pad Connections

1 Enable/Disable (E or T)
Not Connected (N)
2 Ground
3 Output
4 Supply Voltage

COMPARISON OF ENABLE/DISABLE OPTIONS

	Option 'E'	Option 'T'
When enabled (PIN 1 is high'*)		
Output	Freq. Output	Freq. Output
Oscillator	Oscillates	Oscillates
Current Consumption:	Normal	Normal
When disabled (PIN 1 'low')		
Output	High 'Z' state	High 'Z' state
Oscillator	Stops	Oscillates
Current Consumption:	Very low	Lower than normal
When re-enabled (PIN 1 from low to high)		
Output recovery	Delayed	Immediate

* When Pin 1 is allowed to float it is held 'high' by an internal pull-up resistor.
Option 'N' = Pin 1 not connected internally.

HOW TO ORDER HGXO SMD CRYSTAL OSCILLATORS

Example: **HGXO3D-S-T-SM3-20.0M, 30/50/–/I**

HGXO 3 D - S T - SM3 - 32.0M, 100 / 100 / – / I

- **3** — Supply Voltage: 0 = 0.9V, 1 = 1.8V, 2 = 2.5V, 3 = 3.0V, 4 = 3.3V, 5 = 5.0V
- **D** — Shock Level: A = 5,000g, B = 10,000g, C = 20,000g, D = 30,000g, F = 50,000g, G = 75,000g, H = 100,000g
- **S** — Blank = standard, S = special or custom
- **T** — Enable/Disable option, E, T or N
- **SM3** — Terminations: Blank = SM1, =Gold plated, SM3 = Solder dipped, SM5 = Solder dipped (SM1 and SM5 are pB free)
- **32.0M,** — Frequency: K = kHz, M = MHz
- **100** — Calibration Tolerance at 25°C
- **100** — Frequency Stability over Temp. Range (in ppm)
- **–** — Temp. Range: C = -10° ~ +70°C, I = -40° ~ +85°C, M = -55° ~ +125°C, S = Customer specified
- **I**

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