

**Customer Part:**



**Description**

- Simple package crystal oscillator (SPXO) in a seam sealed ceramic package with a metal lid and operates over a wide supply voltage range of 1.62V to 3.63V
- Model IQXO-951 2016
- Model Issue number 2
- Note: Operating temperature range -40 to 125°C is intended for industrial use and not for safety critical applications such as automotive. Please contact IQD for alternative options.

**Frequency Parameters**

- Frequency 24.0MHz
- Frequency Stability ±25.00ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ±3ppm max in 1st year @ 25°C
- Frequency Stability: inclusive of frequency tolerance at 25°C ±3°C and over the operating temperature range.

**Electrical Parameters**

- Current Draw (no load) 7.000mA
- Supply Voltage: 1.62V min to 3.63V max

**Output Details**

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 5.0ns max
- Duty Cycle 45/55%

**Output Control**

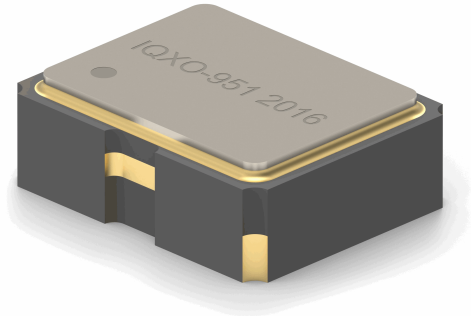
- Standby Operation:  
Logic '1' (>70% VS) to pad 1 enables oscillator output  
Logic '0' (<30% VS) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output.
- Start-up Time: 10ms max  
0.3ms typ to 90% of final amplitude (under ideal conditions @ 25°C)
- Standby Current:  
10µA max, 1.5µA typ @ 25°C over operating temp range up to -40 to 85°C  
20µA max, 1.5µA typ @ 25°C over operating temp range -40 to 125°C

**Output Levels**

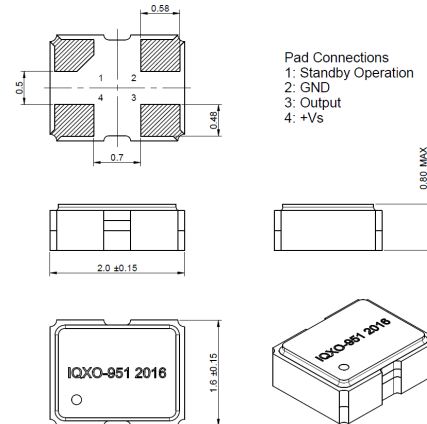
- Output Voltage Levels:  
Output High (VoH): Vs-0.4V min  
Output Low (VoL): 0.4V max

**Noise Parameters**

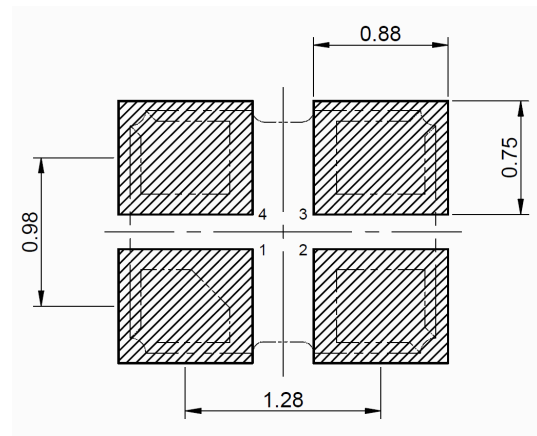
- RMS Phase Jitter (12kHz to 20MHz): 368fs typ @ 25MHz
- Phase Noise (typ @ 25MHz and @ 25°C):  
-90dBc/Hz @ 10Hz  
-118dBc/Hz @ 100Hz  
-132dBc/Hz @ 1kHz  
-145dBc/Hz @ 10kHz  
-151dBc/Hz @ 100kHz  
-154dBc/Hz @ 1MHz  
-155dBc/Hz @ 5MHz



**Outline (mm)**



**Recommended Solder Pad Layout**



**Sales Office Contact Details:**

UK: +44 (0)1460 270200

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

### Customer Part:

#### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Vibration (MIL-STD-883F:2007.2): 20Hz-2000Hz, 1.52mm peak amplitude, 20g acceleration in 3 mutually perpendicular planes, sweep time 20mins per axis (total 4hrs)

#### Manufacturing Details

- RoHS Terminations                    Au
- RoHS Reflow Temp                    260°C max

#### Compliance

- RoHS Status (2015/863/EU)            Compliant
- REACH Status                            Compliant
- MSL Rating (JDEC-STD-033):        1

#### Packaging Details

- Pack Style: Reel    Tape and reel in accordance with EIA-481  
Standard Pack Quantity: 3,000
- *Alternative packing option available*

---

### Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)