

ISSUE 3; April 2025

### Description

- 1.2V low voltage oscillator in a hermetically sealed 3.2 x 2.5mm surface mount ceramic package.



### Frequency Parameters

- Frequency: 10.0MHz to 50.0MHz
- Frequency Stability:  $\pm 20.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max in 1st year @ 25°C

### Electrical Parameters

- Supply Voltage: 1.2V  $\pm 5\%$
- Note: Other Supply Voltages are available - please contact IQD Sales Office.

### Operating Temperature Ranges

- 0 to 70°C
- 20 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Output Voltage Levels:  
Output Low (VoL): 10%Vs max  
Output High (VoH): 90%Vs min
- Start Up Time: 10ms max

### Output Control

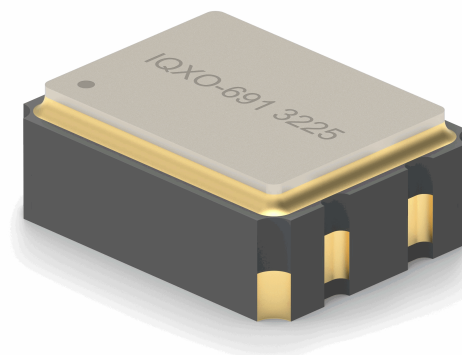
- Standby Operation:  
Logic '1' ( $\geq 70\%$  Vs) to pad 1 enables oscillator output.  
Logic '0' ( $\leq 30\%$  Vs) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.  
No connection to pad 1 enables oscillator output (internal pull-up resistor).
- Standby Current: 100 $\mu$ A max

### Noise Parameters

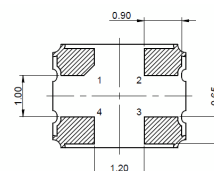
- RMS Phase Jitter (12kHz to 20MHz): 1ps max

### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Mechanical Shock: MIL-STD-883, Method 2002, Condition B.
- Vibration: MIL-STD-883, Method 2007, Condition A.
- Moisture Resistance: MIL-STD-883, Method 1004.
- Thermal Cycling: MIL-STD-883, Method 1010, Condition B.
- Solderability: MIL-STD-883, Method 2003.
- Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition K.
- Fine Leak Test: MIL-STD-883, Method 1014, Condition A.
- Gross Leak Test: MIL-STD-883, Method 1014, Condition C.

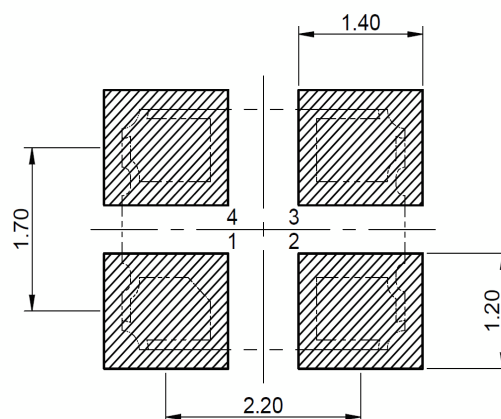
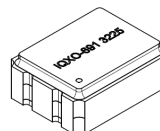
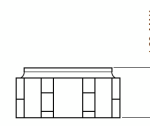
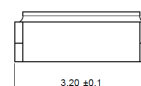


### Outline (mm)



### Pad Connections

- Standby
- GND
- Output
- Vs



### 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)

### Manufacturing Details

- Note: Please connect a bypass capacitor of 0.1μF between +Vs and circuit ground.
- RoHS Terminations                      Au
- RoHS Reflow                                260°C max for 10secs max

### Ordering Information

- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- (\*minimum required)
- Example
- 24.0MHz IQXO-691 3225-12
- CMOS ±25ppm -40 to 85C 1.2V

### Compliance

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

### Packaging Details

- Tape & reel in accordance with EIA-481
- Quantities below the standard reel size to be supplied on cut tape
- Standard Pack Quantity: 3,000

### Electrical Specification - maximum limiting values 1.2V ±5%

| Frequency Min | Frequency Max | Temperature Range | Stability (Min) | Current Draw | Rise and Fall Time | Duty Cycle |
|---------------|---------------|-------------------|-----------------|--------------|--------------------|------------|
|               |               | °C                | ppm             | mA           | ns                 | %          |
| 10.0MHz       | 50.0MHz       | 0 to 70           | ±20.0           | 10           | 5                  | 45/55%     |
|               |               | -20 to 70         | ±20.0           | 10           | 5                  | 45/55%     |
|               |               | -40 to 85         | ±25.0           | 10           | 5                  | 45/55%     |

*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

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

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