

ISSUE 1; January 2017

### Description

- 1.6 x 1.2mm crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed.



### Frequency Parameters

- Frequency: 32.768kHz
- Frequency Stability:  $\pm 30.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Frequency Stability: Includes Frequency Tolerance @ 25°C, operating temperature range, supply voltage variation and load variation.

### Electrical Parameters

- Supply Voltage: 1.8V  $\pm 10\%$

### Operating Temperature Ranges

- 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

- Stand-by Mode:
  - Logic '0' (30%Vs max) to pad 1 disables the oscillator output, the output goes to a high impedance state.
  - Logic '1' (70%Vs min) or no connection to pad 1 enables oscillator output.
- Stand-by Current: 1.4µA typical 3µA max

### Environmental Parameters

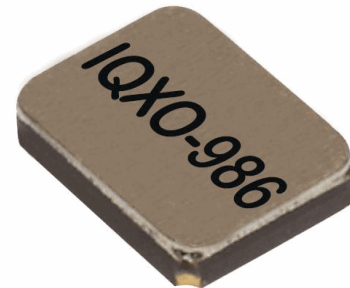
- Storage Temperature Range: -40 to 85°C

### Ordering Information

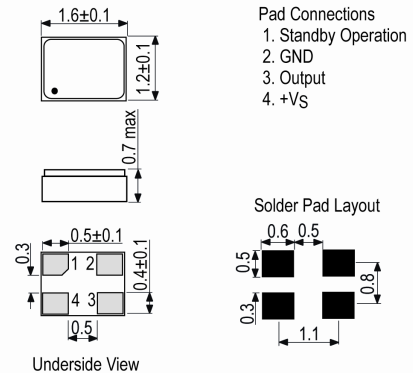
- Frequency
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- (\*minimum required)
- Example
  - 32.768kHz IQXO-986
  - CMOS  $\pm 50\text{ppm}$  -20 to 70C 1.8V

### Compliance

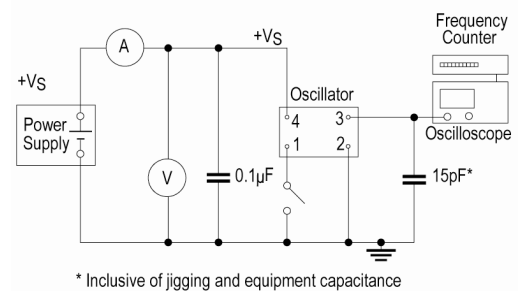
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



### Outline (mm)



### Test Circuit



### Sales Office Contact Details:

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

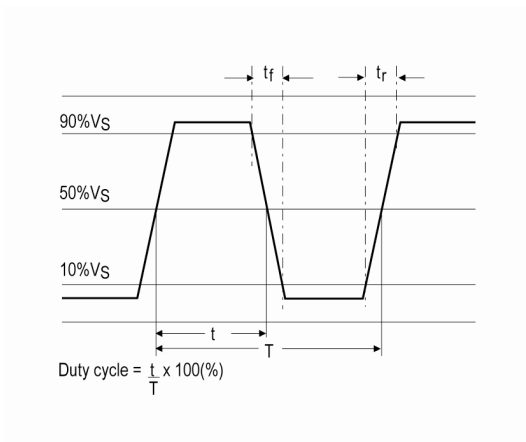
France: 0800 901 383  
USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

**Packaging Details**

- Pack Style: Bulk      Loose in bulk pack  
   Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
   Pack Size: 3,000
- Pack Style: Cutt      In tape, cut from a reel  
   Pack Size: 1

**Wave Form**



**Electrical Specification - maximum limiting values 1.80V ±10%**

Frequency	Temperature Range	Stability (Min)	Current [typ]	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
32.768000kHz	-40 to 85	±50.00	0.024	200	45/55
	-20 to 70	±30.00	0.024	200	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  
 Germany: 0800 1808 443

France: 0800 901 383  
 USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
 Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)