

ISSUE 3; April 2016

### Description

- LVPECL output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid. Replacement for model CFPS-34. For higher frequencies please see our IQXO-690 model.

### Frequency Parameters

- Frequency: 15.0MHz to 160.0MHz
- Frequency Stability:  $\pm 25.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max per year @ 25°C

### Electrical Parameters

- Supply Voltage: 3.3V  $\pm 5\%$

### Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: LVPECL
- Drive Capability: 50Ω terminated to  $V_S - 2.0V$
- Output Voltage Levels:
  - Output Low (VoL): 1.680V max
  - Output High (VoH): 2.275V min

### Output Control

- Enable/Disable:
  - Logic '1' (70%  $V_S$  min) to pad 1 enables oscillator output.
  - Logic '0' (30%  $V_S$  max) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state.
  - No connection to pad 1 enables oscillator output.
  - Standby Current: 10μA max

### Noise Parameters

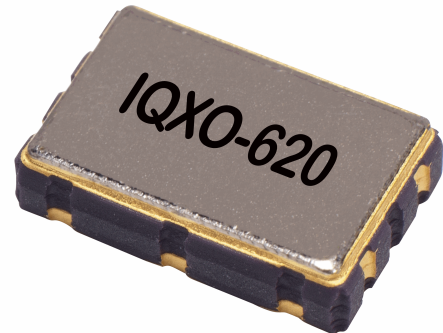
- Phase Jitter (12kHz to 20MHz): 1ps rms max

### Environmental Parameters

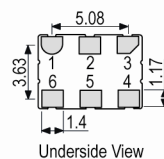
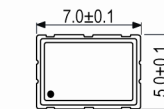
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G, 0.5ms, half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

### Ordering Information

- Frequency\*
  - Model\*
  - Output
  - Frequency Stability (over operating temperature range)\*
  - Operating Temperature Range\*
  - Supply Voltage
  - (\*minimum required)
- Example
  - 100.0MHz IQXO-620
  - LVPECL  $\pm 50\text{ppm}$  -10 to 70C 3.3V



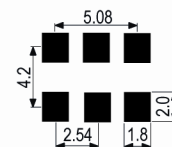
### Outline (mm)



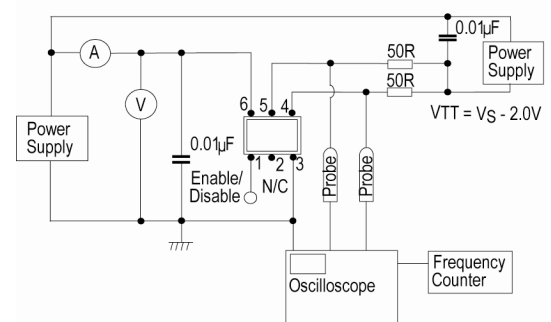
### Pad Connections

- Enable/Disable
- N/C
- GND
- Output +
- Output -
- +Vs

### Solder Pad Layout



### 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)

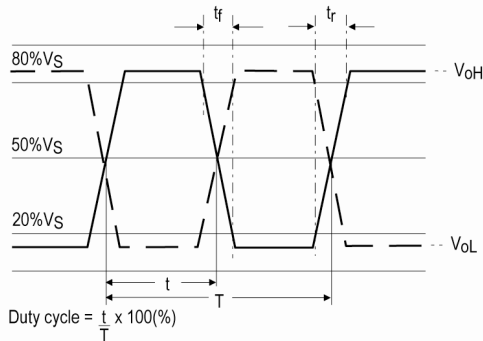
**Compliance**

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

**Packaging Details**

- Pack Style: Bulk      Loose in bulk pack  
   Pack Size: 100
- Pack Style: Cutt      Cut tape  
   Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
   Pack Size: 1,000

**Wave Form**



**Electrical Specification - maximum limiting values 3.3V ±5%**

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
15.0MHz	99.999999MHz	-10 to 70	±25.0	70	1	45/55%
		-40 to 85	±25.0	70	1	45/55%
100.0MHz	160.0MHz	-10 to 70	±25.0	70	0.5	45/55%
		-40 to 85	±25.0	70	0.5	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  
 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)