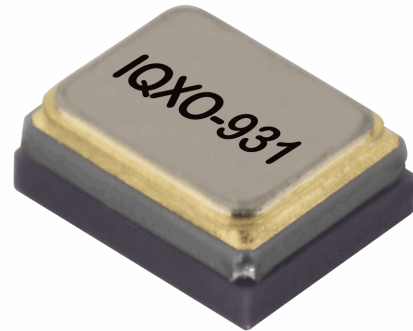


ISSUE 1; March 2016

### Description

- The IQXO-931 combines very low rms phase jitter and tight frequency stability in an industry standard 2.5 x 2.0mm SMD package. Available in industry standard frequencies from 8MHz to 1.5GHz for fast delivery and reduced inventory levels.
- Applications:
  - Ethernet (10G/40G/100G)
  - Communications
  - Base stations
  - DSL/ADSL
  - Wi-Fi
  - Consumer
  - WiMAX / W-LAN
- Features:
  - Fast sample turnaround
  - CMOS, LVPECL, or LVDS output options
  - 0.5 ps integrated RMS phase jitter (12kHz to 20MHz)
  - Low power differential outputs
  - Wide frequency range



### Frequency Parameters

- Frequency: 8.0MHz to 1.5GHz
- Frequency Stability:  $\pm 10.00\text{ppm}$  to  $\pm 20.00\text{ppm}$
- Frequency Stability (including temperature range, supply voltage variation, load variation and 10 years ageing at 25°C):  $\pm 35\text{ppm}$  to  $\pm 100\text{ppm}$

### Electrical Parameters

- Supply Voltage Options:
  - 3.3V  $\pm 10\%$
  - 2.5V  $\pm 5\%$
- Supply Current:
  - CMOS 30 mA max
  - LVPECL 65mA max
  - LVDS 40mA max

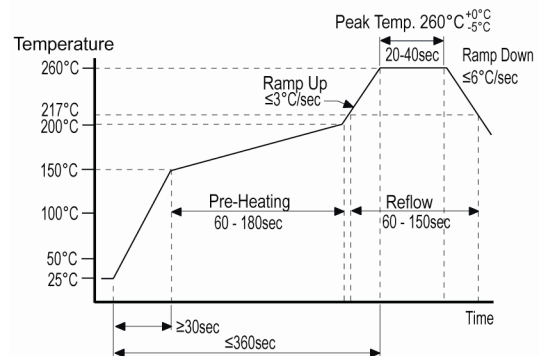
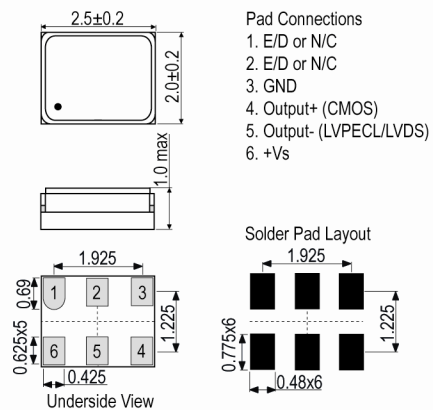
### Operating Temperature Ranges

- -40 to 85°C

### Output Details

- Output Compatibility: CMOS/LVPECL/LVDS
- CMOS output (up to 200MHz):
  - Load 15pF max
  - Output Voltage Low (Vol): 10%Vs max
  - Output Voltage High (Voh): 90%Vs min
  - Duty Cycle: 48/52% max
  - R/F time (90%-10%): 3ns max
- LVPECL output:
  - Output Voltage High (Voh) 50Ω (Vs-1.62V) max
  - Output Voltage Low (Vol) 50Ω (Vs-1.025V) min
  - Duty Cycle (@ Vs-1.3V): 45/55% max
  - R/F time (80%-20%): 0.6ns max
- LVDS output:
  - Load 100Ω
  - Differential Output Voltage Swing (Vod): 350mV
  - Duty Cycle (@ 1.25V): 45/55% max over 150MHz
  - R/F time (100Ω / 10pF): 0.6ns max

### Outline (mm)



### Sales Office Contact Details:

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

**Output Control**

- Output Control Options: Pad 1 or pad 2: E/D or N/C  
 ≥70%Vs to E/D or open-circuit (internal pull-up resistor):  
 Output Enabled  
 ≤30%Vs to E/D: Output Disabled

**Noise Parameters**

- RMS phase Jitter (12kHz to 20MHz):  
 1.0ps typical, 2.0ps max  
 Note 0.5ps typical, 1.0ps max available for specific frequencies  
 Please contact our Application Support team for details

**Environmental Parameters**

- Shock: MIL-STD-883, Method 2002
- Storage Temperature Range: -55 to 125°C
- Thermal Shock: MIL-STD-883, Method 1011
- Vibration: MIL-STD-883, Method 2007

**Manufacturing Details**

- Reflow Soldering Temperature: 260°C max for 20-40sec max

**Ordering Information**

- \*minimum information required  
 Frequency\*  
 Model\*  
 Supply Voltage\*  
 Output type\*  
 Pad 1 & 2 function\*  
 Frequency Stability\*  
 Operating Temperature Range\*

**Compliance**

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

**Packaging Details**

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
 Pack Size: 3,000

**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
8.0MHz	1.5GHz	-40 to 85	±10.0	-	-	-

*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.](#)

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