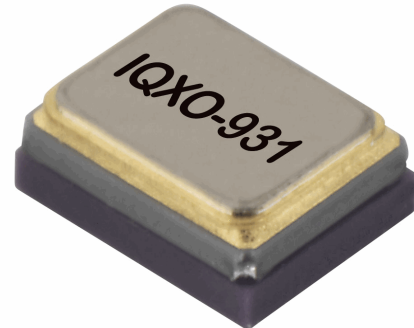


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Description

- 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

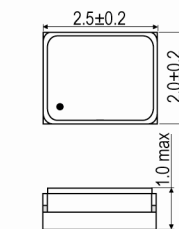
Operating Temperature Ranges

- -40 to 85°C

Output Details

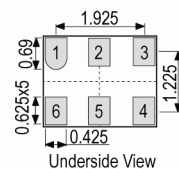
- Output Compatibility: CMOS/LVPECL/LVDS
- CMOS output (up to 200MHz):
 - Load 15pF max
 - Output Voltage Low (Vol): 10%Vs max
 - Output Voltage High (Voh): 90%Vs min
 - Duty Cycle: 48/52% max
 - R/F time (90%-10%): 3ns max
- LVPECL output:
 - Output Voltage High (Voh) 50Ω (Vs-1.62V) max
 - Output Voltage 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)

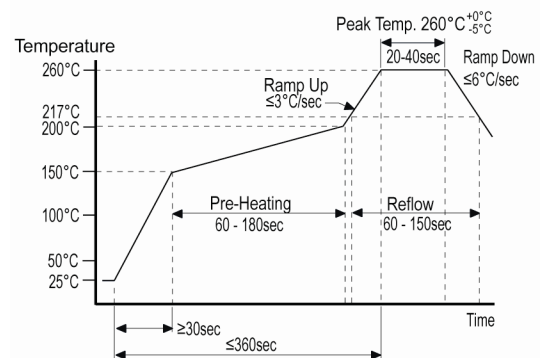
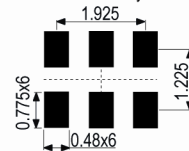


Pad Connections

1. E/D or N/C
2. E/D or N/C
3. GND
4. Output+ (CMOS)
5. Output- (LVPECL/LVDS)
6. +Vs



Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Output Control

- Output Control Options: Pad 1 or pad 2: E/D or N/C
 $\geq 70\%V_s$ to E/D or open-circuit (internal pull-up resistor):
 Output Enabled
 $\leq 30\%V_s$ 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
- RoHS Reflow 260°C max for 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 (2015/863/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
- Pack Style: Cutt In tape, cut from a reel.
 Pack Size: 100

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	-	-	-

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