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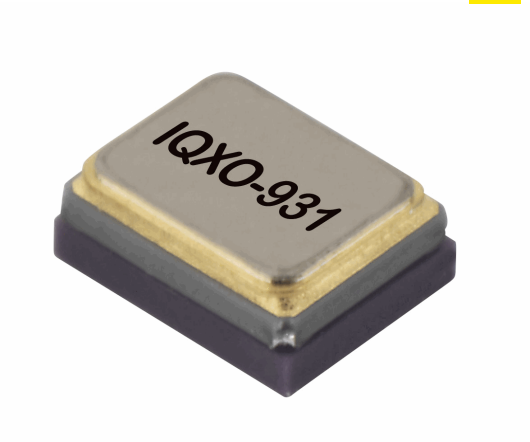
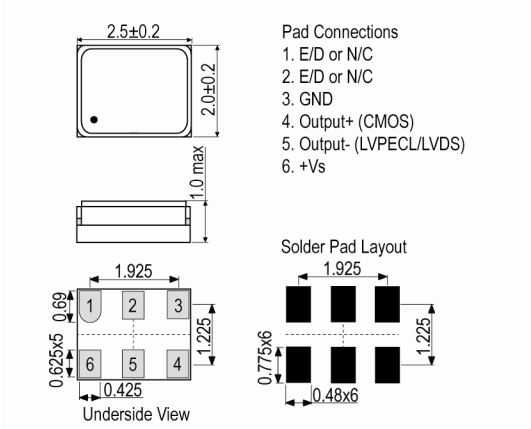
Description

- 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



Outline (mm)



Frequency Parameters

Frequency	8.0MHz to 1.5GHz
Frequency Stability	±10.00ppm to ±20.00ppm

Electrical Parameters

- Frequency Stability (including temperature range, supply voltage variation, load variation and 10 years ageing at 25°C):
  ±30ppm to ±50ppm
- Supply Voltage Options:
  3.3V ±10%
  2.5V ±5%
- Supply Current:
  CMOS 40 mA max
  LVPECL 65mA max
  LVDS 40mA max

Operating Temperature Ranges

- -40 to 85°C

Output Details

- Output Compatability: 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
  Phase Jitter (12kHz-20MHz): 0.5ps rms 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
  Phase Jitter (12kHz-20MHz): 0.5ps rms 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
  Phase Jitter (12kHz-20MHz): 0.5ps rms max

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Output Control

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

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: Bulk Loose in bulk pack
  Pack Size: 1
- 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	-	-	-

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