

ISSUE 1; October 2018

Description

- The IQXO-936 selectable XO combines small size and low RMS phase jitter with the ability to select output frequency from one of four factory-configured values. By combining multiple oscillator specifications into one part, the IQXO-936 can be used to reduce unique part count and provide built-in upgrade paths.
- FEATURES:
 - Up to four frequency selections in one part.
 - CMOS, LVPECL or LVDS output options.
 - 1.0ps RMS phase jitter (12kHz to 20MHz).
 - Wide frequency range.
 - Fast sample turn around.
- APPLICATIONS:
 - Ethernet (10G / 40G / 100G)
 - Communications
 - Base Stations
 - DSL/ADSL
 - PON/FTTH

Frequency Parameters

- Frequency 8.0MHz to 1.5GHz
- Frequency Stability $\pm 35.00\text{ppm}$ to $\pm 50.00\text{ppm}$
- Frequency Stability: Includes Frequency Tolerance @ 25°C, operating temperature range, supply voltage variation, load variation and 10yrs ageing @ 25°C.

Electrical Parameters

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

Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C

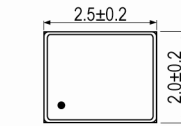
Output Details

- Output Compatibility CMOS/LVPECL/LVDS
- Number of Frequency Selections: 2 to 4
 - 2 outputs with E/D function
 - 3 or 4 outputs without E/D function
- Nominal Frequency 1: 8MHz to 1.5GHz Quad: FS1=0, FS0=0; Dual: FS0=0.
 Nominal Frequency 2: 8MHz to 1.5GHz Quad: FS1=0, FS0=1; Dual: FS0=1.
 Nominal Frequency 3: 8MHz to 1.5GHz Quad: FS1=1, FS0=0.
 Nominal Frequency 4: 8MHz to 1.5GHz Quad: FS1=1, FS0=1.

Output Control

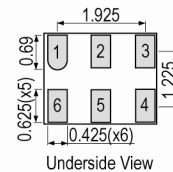
- Enable/Disable Mode:
 - If only two selectable frequencies are used then pad 1 offers an Enable/Disable function.

Outline (mm)

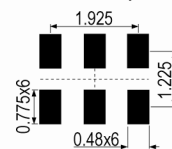


Pad Connections

1. E/D (dual mode), FS1 (quad mode)
2. FS0
3. GND
4. Output
5. NC (CMOS) (Comp O/P LVPECL, LVDS)
6. +Vs



Solder Pad Layout



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Noise Parameters

- RMS Phase Jitter (12kHz to 20MHz):
For integer frequencies: 0.5ps typ, 1ps max
For non-integer frequencies: 1ps typ, 2ps max

Ordering Information

- Frequency 1 & 2 (3 & 4)*
Model*
Output Type*
Supply Voltage*
Frequency Stability*
Operating Temperature Range*
(*minimum required)

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 Tape & reel in accordance with EIA-481-D
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	-20 to 70	±35.0	-	-	-
		-40 to 85	±50.0	-	-	-

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