

ISSUE 1; July 2016

### 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

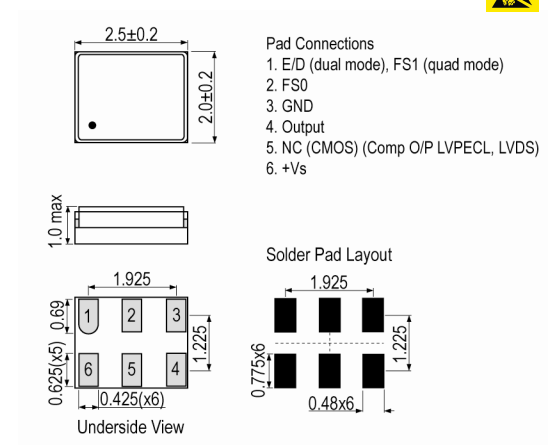
### Output Details

- 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)



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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 (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        | -20 to 70         | ±35.0           | -            | -                  | -          |
|               |               | -40 to 85         | ±50.0           | -            | -                  | -          |

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