

ISSUE 1; January 2016

Description

- The IQXO-942 combines very low RMS phase jitter and tight frequency stability in an industry standard 7 x 5mm SMD package.
- Applications:
 Basestation
 Communications
 Consumer Products
 DSL/ADSL
 Ethernet (10G/40G/100G)
 WiFi
 WiMAX/WLAN
- Features:
 0.5 ps integrated RMS phase jitter (12kHz to 20MHz)
 Fast sample turnaround available
 CMOS, LVPECL, or LVDS Output options
 Wide frequency range
 Low power differential outputs

Frequency Parameters

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

Electrical Parameters

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

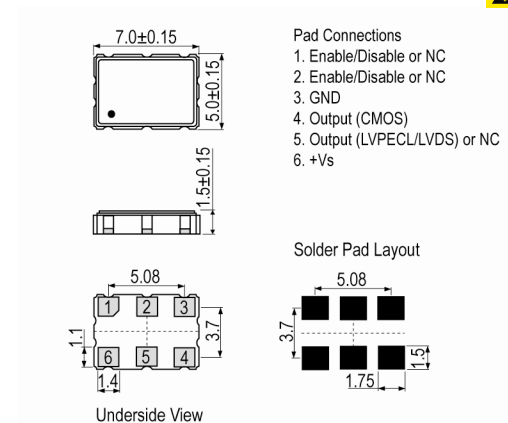
Operating Temperature Ranges

- -40 to 85°C

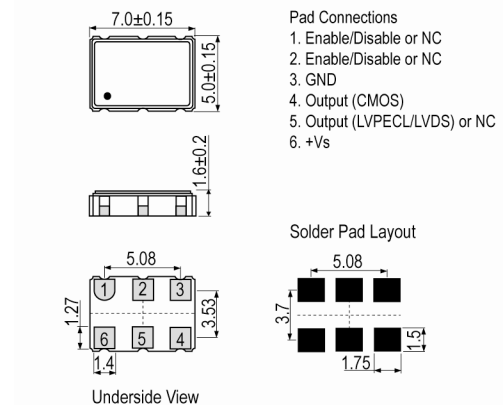
Output Details

- Output Compatibility CMOS/LVPECL/LVDS
- Output Characteristics (CMOS up to 200MHz):
 Load: 15pF
 Output Low (Vol): 10%Vs max
 Output High (Voh): 90%Vs min
 Duty Cycle @ 50% Vs: 48/52% max
 R/F Time (@ 90%/10%): 3ns max
 Phase Jitter (12kHz-20MHz): 0.5ps rms max
- Output Characteristics (LVPECL):
 Load: 50Ω
 Output Low (Vol): Vs-1.6V max
 Output High (Voh): Vs-1.03V min
 Duty Cycle (@ Vs-1.3V): 45/55% max (over 600MHz)
 R/F Time (@ 80%/20%): 0.6ns max
 Phase Jitter (12kHz-20MHz): 0.5ps rms max
- Output Characteristics (LVDS):
 Load: 100Ω
 Differential Output Voltage: 350mV
 Duty Cycle (@ 1.25V): 48/52% (45/55% over 150MHz)
 R/F Time: 0.6ns max
 Phase Jitter (12kHz-20MHz): 0.5ps rms max

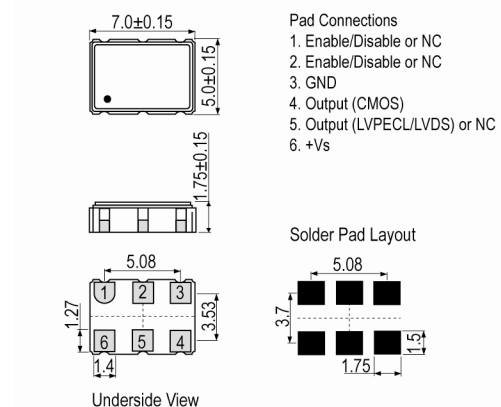
Outline (mm) 1.5mm package height



Outline (mm) 1.6mm package height



Outline (mm) = 1.75mm package height



Sales Office Contact Details:

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Output Control

- Enable/Disable:
 Logic '1' (70%Vs min) to pad 1 or no connection enables oscillator output
 Logic '0' (30%Vs max) to pad 1 disables oscillator output

Environmental Parameters

- Shock: MIL-STD-883, Method 2002
- Storage Temperature Range: -55 to 125°C
- Humidity: after 48 hours at 85 °C ±2 °C 85 % relative humidity non-condensing
- Thermal Shock: MIL-STD-883, Method 1011
- Vibration: MIL-STD-883, Method 2007

Ordering Information

- *minimum information required
 Frequency*
 Model*
 Output Type*
 Pad 1 or 2 function*
 Supply Voltage*
 Frequency Stability*
 Operating Temperature Range*

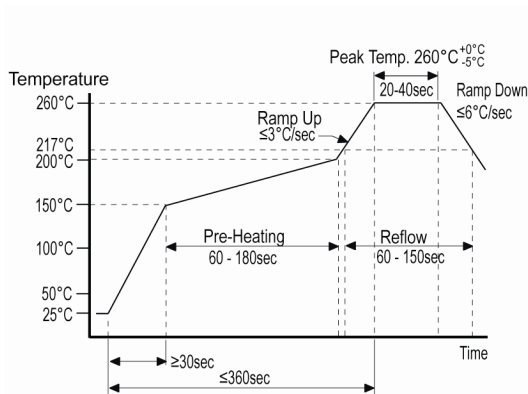
Compliance

- 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: 2,000

Pb-Free Reflow



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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	-	-	-	-

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