

ISSUE 0; April 2016

Description

- The IQXO-947 is a CMOS oscillator that operates at standard voltages from 1.8 to 5V to address the tight stability requirements of computing processors and commercial networking applications.
- Applications:
 - Consumer
 - Industrial
 - Mobile communications
 - DSL/ADSL
 - Ethernet
 - WiMAX/W-LAN
- Features:
 - Fast sample turnaround
 - Low power consumption
 - Extended temperature range
 - 1.8 to 5.0V operating voltage

Frequency Parameters

- Frequency: 500.0kHz to 160.0MHz
- Frequency Stability: $\pm 20.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max in 1st year at 25°C
- Frequency Stability (includes tolerance)

Electrical Parameters

- Supply Voltage Options:
 - 1.8V $\pm 5\%$
 - 2.5V $\pm 5\%$
 - 3.3V $\pm 10\%$
 - 5.0V $\pm 10\%$
- Supply Current: 5mA to 80mA

Operating Temperature Ranges

- -40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF
- Output Characteristics:
 - Output Low (Vol): 10%Vs max
 - Output High (Voh): 90%Vs min
 - Duty Cycle @ 50% Vs: 40/60 % max
 - R/F Time (@ 80%/20%): 10ns max
 - Start-Up Time: 10ms max

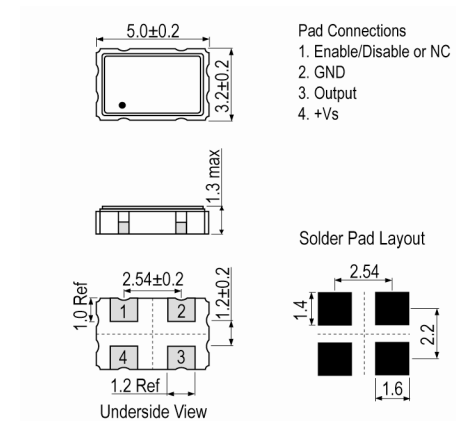
Output Control

- 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

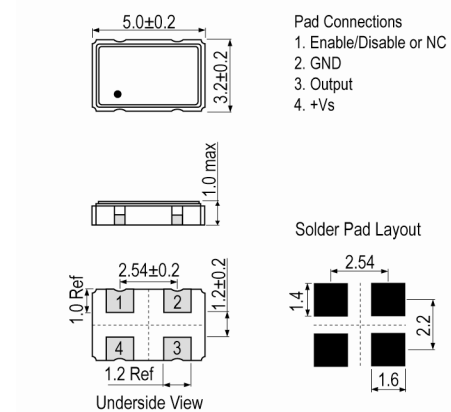
Environmental Parameters

- 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

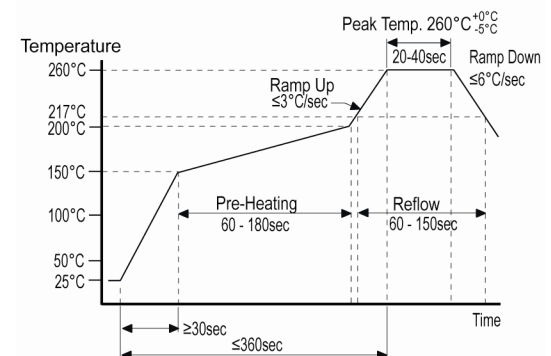
Outline (mm) 1.3mm package height



Outline (mm) 1mm package height



Pb-Free Reflow



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Ordering Information

- *minimum information required
Frequency*
Model*
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: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Bulk Loose in bulk pack
Pack Size: 1

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	%
500.0kHz	160.0MHz	-40 to 85	±20.0	-	-	-

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