IQXO-62x

LVPECL output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid.

Model Name	Description
IQXO-623	**A 2.5V Version**
IQXO-624	**A 3.3V Version**

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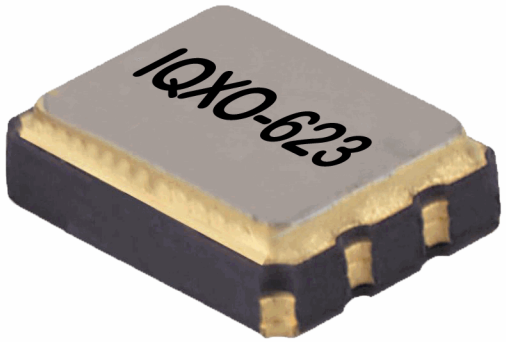
Crystal Clock Oscillator Specification
IQXO-623

ISSUE 1; March 2020

Description

- LVPECL output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid.



Frequency Parameters

- Frequency 13.5MHz to 156.25MHz
- Frequency Stability ±25.00ppm to ±100.00ppm
- Ageing ±3ppm max per year @ 25°C

Electrical Parameters

- Supply Voltage 2.5V ±5%

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -40 to 125°C

Output Details

- Output Compatibility LVPECL
- Drive Capability 50Ω terminated to Vs-2.0V
- Output Voltage Levels:
  Output Low (VoL): 1.095V max
  Output High (VoH): 1.475V min

Output Control

- Enable/Disable:
  Logic '1' (70% Vs min) to pad 1 enables oscillator output.
  Logic '0' (30% Vs max) to pad 1 disables oscillator output.
  No connection to pad 1 enables oscillator output due to internal pull-up resistor.
- Standby Current: 10µA max

Noise Parameters

- Phase Jitter (12kHz to 20MHz): 1ps rms max
  Phase Jitter (12kHz to 20MHz): 0.171ps rms typ @ 100MHz

Environmental Parameters

- Storage Temperature Range: –55 to 125°C
- Shock: 1500G, 0.5ms, 3 times for each surface, total 18 times.
- Vibration: Freq. range: 20~2000Hz, peak to peak amplitude: 1.52mm, peak acceleration: 20G (196m/s2), 3 direction(X, Y,Z) ,each cycle: 20min, 4 cycles for each direction.

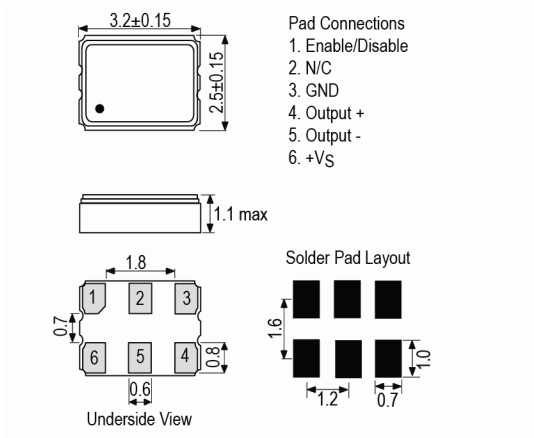
Ordering Information

- Frequency*
  Model*
  Output
  Frequency Stability (over operating temperature range)*
  Operating Temperature Range*
  Supply Voltage
  (*minimum required)
- Example
  156.25MHz IQXO-623
  LVPECL ±50ppm –40 to 85C 2.5V

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Outline (mm)



Crystal Clock Oscillator Specification
IQXO-623

ISSUE 1; March 2020

Packaging Details

- Pack Style: Cutt — Cut tape
  Pack Size: 100
- Pack Style: Reel — Tape & reel in accordance with EIA-481-D
  Pack Size: 3,000

Electrical Specification - maximum limiting values 2.5V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time (20-80%)	Duty Cycle
		°C	ppm	mA	ns	%
13.5MHz	99.999999MHz	-10 to 70	±25.0	50	1	45/55%
		-40 to 85	±25.0	50	1	45/55%
		-40 to 125	±100.0	50	1	45/55%
100.0MHz	156.25MHz	-10 to 70	±25.0	50	0.5	45/55%
		-40 to 85	±25.0	50	0.5	45/55%
		-40 to 125	±100.0	50	0.5	45/55%

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Crystal Clock Oscillator Specification
IQXO-624

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Description

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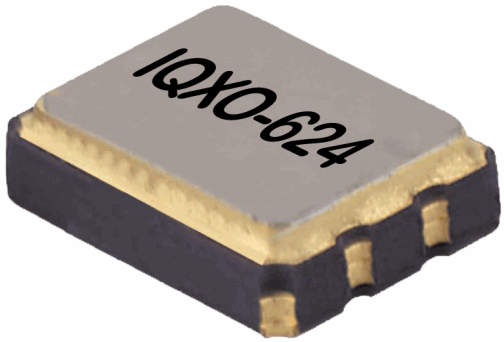

Frequency Parameters

- Frequency 13.5MHz to 156.25MHz
- Frequency Stability ±25.00ppm to ±100.00ppm
- Ageing ±3ppm max per year @ 25°C

Electrical Parameters

- Supply Voltage 3.3V ±5%

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -40 to 125°C

Output Details

- Output Compatibility LVPECL
- Drive Capability 50Ω terminated to Vs-2.0V
- Output Voltage Levels:
  Output Low (VoL): 1.680V max
  Output High (VoH): 2.275V min

Output Control

- Enable/Disable:
  Logic '1' (70% Vs min) to pad 1 enables oscillator output.
  Logic '0' (30% Vs max) to pad 1 disables oscillator output.
  No connection to pad 1 enables oscillator output due to internal pull-up resistor.
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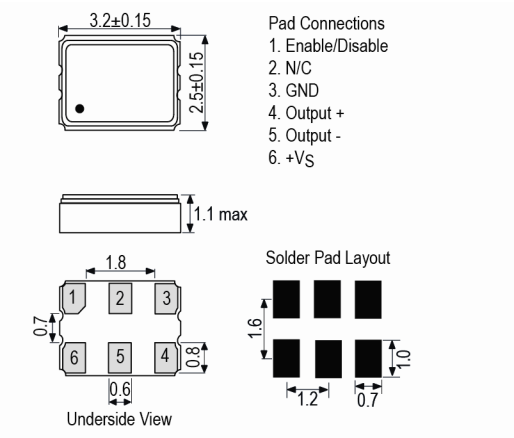
Ordering Information

- Frequency*
  Model*
  Output
  Frequency Stability (over operating temperature range)*
  Operating Temperature Range*
  Supply Voltage
  (*minimum required)
- Example
  156.25MHz IQXO-624
  LVPECL ±50ppm –40 to 85C 3.3V

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Outline (mm)



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- Pack Style: Cutt — Cut tape
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		-40 to 125	±100.0	50	0.5	45/55%

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