



IQXO-80x

IQXO-80x

Surface mount oscillator in a ceramic package, with a hermetically sealed metal lid. Suitable for Industrial applications, qualified to AEC-Q200.

Model Name	Description
IQXO-800	A 5.0V Version
IQXO-801	A 3.3V Version

ISSUE 2; January 2024

Description

- Surface mount oscillator in a ceramic package, with a hermetically sealed metal lid. Suitable for Industrial applications, qualified to AEC-Q200 Rev D.



Frequency Parameters

- Frequency: 4.0MHz to 110.0MHz
- Frequency Stability: $\pm 50.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage: 5.0V $\pm 10\%$

Operating Temperature Ranges

- 0 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: HCMOS
- Drive Capability: 15pF

Output Control

- Tri-State Operation:
Logic '1' (>90%Vs) to pad 1 enables oscillator output.
Logic '0' (<10%Vs) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.
No connection to pad 1 enables oscillator output.
- Standby Current: 10µA max

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Qualified to AEC-Q200 Rev D.

Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)

Ordering Information

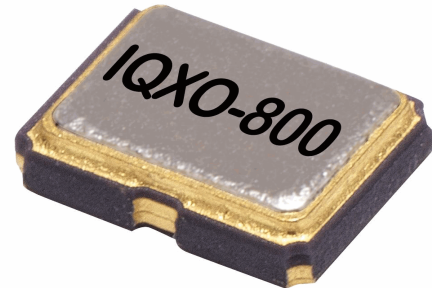
- Frequency*
- Model*
- Output Compatibility
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
(*minimum required)
- Example
10.0MHz IQXO-800
HCMOS $\pm 100\text{ppm}$ -40 to 85C 5.0V

Compliance

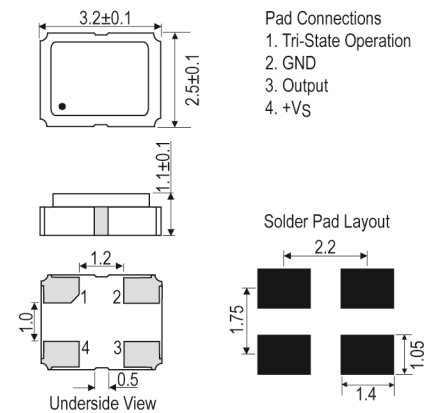
- RoHS Status (2015/863/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

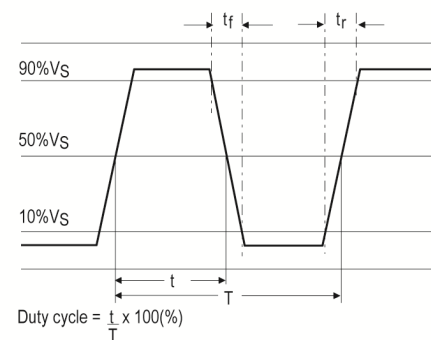
- Pack Style: Cutt: Cut tape
Pack Size: 100
- Pack Style: Reel: Tape & reel in accordance with EIA-481
Pack Size: 3,000



Outline (mm)



Wave Form





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Electrical Specification - maximum limiting values 5.0V \pm 10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
4.0MHz	9.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	10 10	10 10	40/60% 40/60%
10.0MHz	19.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	15 15	10 10	40/60% 40/60%
20.0MHz	29.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	25 25	10 10	40/60% 40/60%
30.0MHz	49.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	35 35	6 6	40/60% 40/60%
50.0MHz	79.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	45 45	5 5	40/60% 40/60%
80.0MHz	99.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	50 50	4.5 4.5	40/60% 40/60%
100.0MHz	110.0MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	55 55	3.5 3.5	40/60% 40/60%

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Frequency Parameters

- Frequency: 4.0MHz to 110.0MHz
- Frequency Stability: $\pm 50.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage: 3.3V $\pm 10\%$

Operating Temperature Ranges

- 0 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: HCMOS
- Drive Capability: 15pF

Output Control

- Tri-State Operation:
Logic '1' ($>90\%V_S$) to pad 1 enables oscillator output.
Logic '0' ($<10\%V_S$) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.
No connection to pad 1 enables oscillator output.
- Standby Current: 10 μA max

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Qualified to AEC-Q200 Rev D.

Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)

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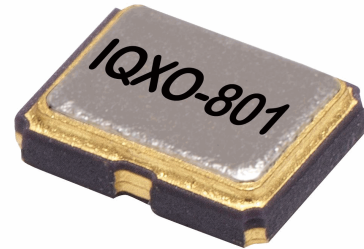
- Frequency*
- Model*
- Output Compatibility
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
(*minimum required)
- Example
10.0MHz IQXO-801
HCMOS $\pm 100\text{ppm}$ -40 to 85C 3.3V

Compliance

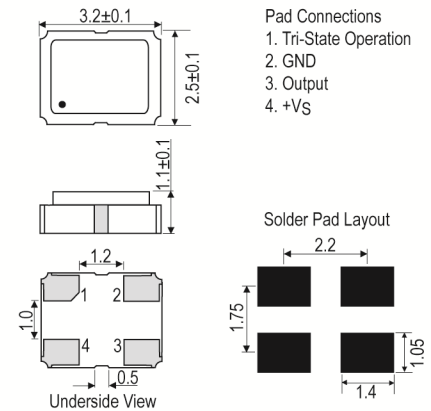
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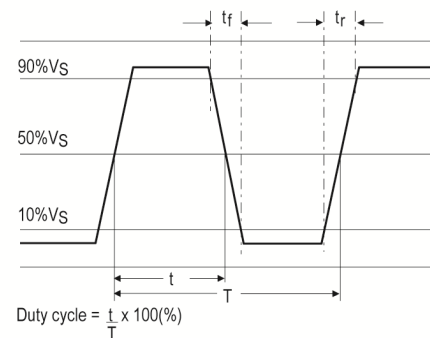
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Outline (mm)



Wave Form



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Electrical Specification - maximum limiting values 3.3V \pm 10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
4.0MHz	9.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	7 7	10 10	40/60% 40/60%
10.0MHz	19.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	7 7	10 10	40/60% 40/60%
20.0MHz	29.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	10 10	10 10	40/60% 40/60%
30.0MHz	49.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	15 15	10 10	40/60% 40/60%
50.0MHz	79.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	20 20	8 8	40/60% 40/60%
80.0MHz	99.999999MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	25 25	5 5	40/60% 40/60%
100.0MHz	110.0MHz	0 to 70 -40 to 85	\pm 50.0 \pm 50.0	40 40	4 4	40/60% 40/60%

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Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 668 8935

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com