



IQXO-6xx

LVDS/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. Replacement for model CFPS-60. For higher frequencies please see our IQXO-710 model.

Model Name	Description
IQXO-620	A 3.3V LVPECL version
IQXO-621	A 2.5V LVPECL version
IQXO-660	A 3.3V LVDS version
IQXO-661	A 2.5V LVDS version

ISSUE 3; December 2017

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. Replacement for model CFPS-34.
- For higher frequencies please see our IQXO-690 model.



Frequency Parameters

- Frequency 15.0MHz to 160.0MHz
- Frequency Stability $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

Output Details

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

Output Control

- Enable/Disable:
Logic '1' (70% V_S min) to pad 1 enables oscillator output.
Logic '0' (30% V_S max) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state.
No connection to pad 1 enables oscillator output.
Standby Current: 10μA max

Noise Parameters

- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

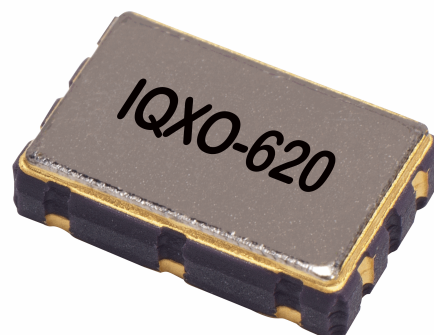
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G, 0.5ms, half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

Ordering Information

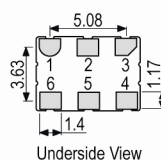
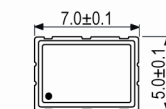
- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
100.0MHz IQXO-620
LVPECL $\pm 50\text{ppm}$ -10 to 70C 3.3V

Compliance

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



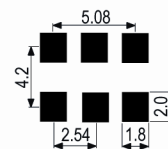
Outline (mm)



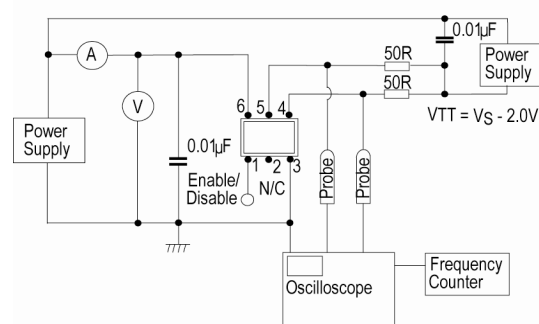
Underside View

- Pad Connections
1. Enable/Disable
 2. N/C
 3. GND
 4. Output +
 5. Output -
 6. +Vs

Solder Pad Layout



Test Circuit

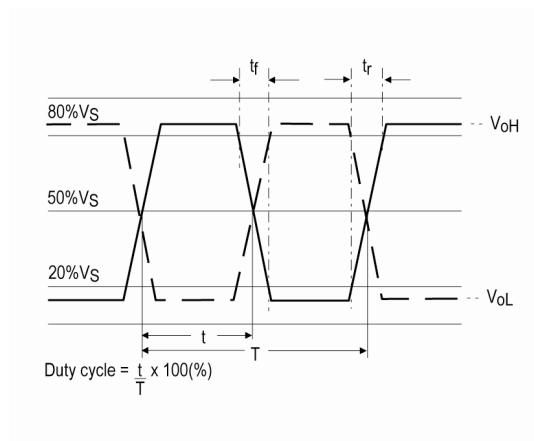


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Packaging Details

- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Wave Form



Electrical Specification - maximum limiting values 3.3V $\pm$ 5%

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
15.0MHz	99.999999MHz	-10 to 70	± 25.0	70	1	45/55%
		-40 to 85	± 25.0	70	1	45/55%
100.0MHz	160.0MHz	-10 to 70	± 25.0	70	0.5	45/55%
		-40 to 85	± 25.0	70	0.5	45/55%

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ISSUE 3; December 2017

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. Replacement for model CFPS-59.

Frequency Parameters

- Frequency 15.0MHz to 160.0MHz
- Frequency Stability $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage 2.5V $\pm 5\%$

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

Output Details

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

Output Control

- Enable/Disable:
Logic '1' (70% V_S min) to pad 1 enables oscillator output.
Logic '0' (30% V_S max) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state.
No connection to pad 1 enables oscillator output.
Standby Current: 10μA max

Noise Parameters

- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G, 0.5ms, half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

Ordering Information

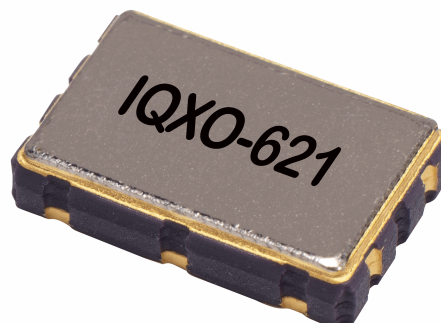
- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
100.0MHz IQXO-621
LVPECL $\pm 50\text{ppm}$ -10 to 70C 2.5V

Compliance

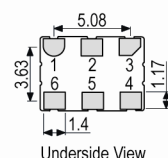
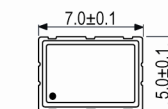
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
- Pack Size: 1,000



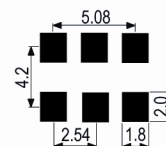
Outline (mm)



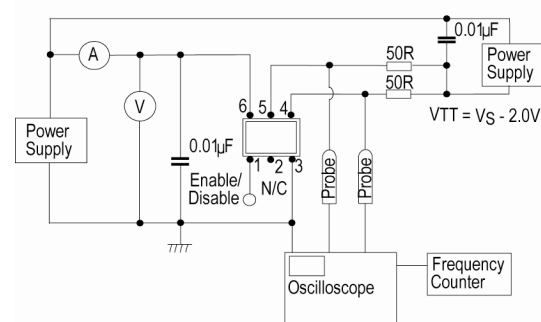
Pad Connections

1. Enable/Disable
2. N/C
3. GND
4. Output +
5. Output -
6. +Vs

Solder Pad Layout

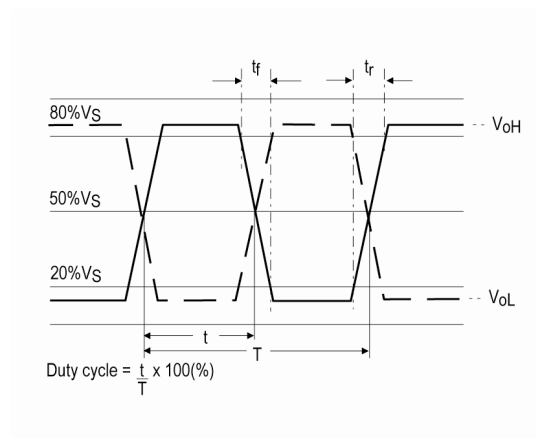


Test Circuit



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Wave Form



Electrical Specification - maximum limiting values 2.5V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
15.0MHz	99.999999MHz	-10 to 70	±25.0	70	1	45/55%
		-40 to 85	±25.0	70	1	45/55%
100.0MHz	160.0MHz	-10 to 70	±25.0	70	0.5	45/55%
		-40 to 85	±25.0	70	0.5	45/55%

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ISSUE 2; December 2017

Description

- LVDS output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid. Replacement for model CFPS-60. For higher frequencies please see our IQXO-710 model.

Frequency Parameters

- Frequency 15.0MHz to 160.0MHz
- Frequency Stability $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year at 25°C

Electrical Parameters

- Supply Voltage $3.3\text{V} \pm 5\%$

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility LVDS
- Drive Capability 100Ω
- Differential Output Voltage (VoD): 0.247V min, 0.330V typ, 0.454V max.
- Offset Voltage (VOS): 1.125V min, 1.250V typ, 1.375V max.
- Output Voltage Levels:
Output Low (VoL): 0.9V min
Output High (VoH): 1.6V max

Output Control

- Enable/Disable:
Logic '1' ($\geq 70\%$ Vs) to pad 1 enables oscillator output.
Logic '0' ($\leq 30\%$ 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: $10\mu\text{A}$ max

Noise Parameters

- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

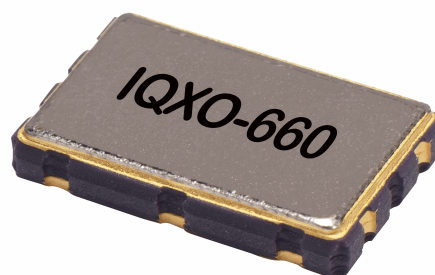
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G , 0.5ms , half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

Ordering Information

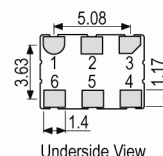
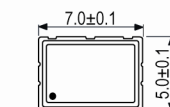
- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
 100.0MHz IQXO-660
LVDS $\pm 50\text{ppm}$ -10 to 70°C 3.3V

Compliance

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



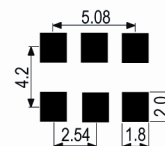
Outline (mm)



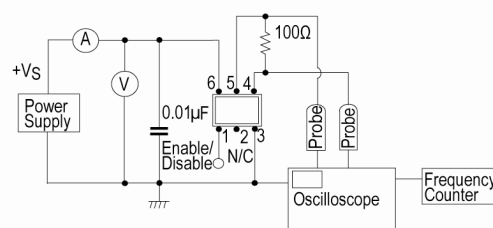
Underside View

Pad Connections
 1. Enable/Disable
 2. N/C
 3. GND
 4. Output +
 5. Output -
 6. +Vs

Solder Pad Layout



Test Circuit

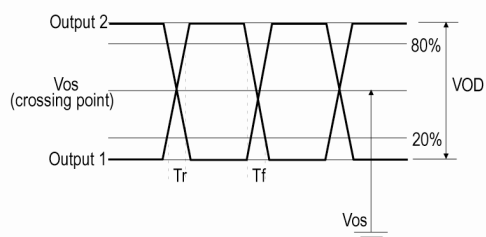


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Packaging Details

- Pack Style: Cutt Cut tape
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Wave Form



Electrical Specification - maximum limiting values 3.3V $\pm$ 5%

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
15.0MHz	99.999999MHz	-10 to 70	$\pm$ 25.0	50	1	45/55%
		-40 to 85	$\pm$ 25.0	50	1	45/55%
100.0MHz	160.0MHz	-10 to 70	$\pm$ 25.0	50	0.5	45/55%
		-40 to 85	$\pm$ 25.0	50	0.5	45/55%

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ISSUE 2; December 2017

Description

- LVDS output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid. Replacement for model CFPS-61.



Frequency Parameters

- Frequency 15.0MHz to 160.0MHz
- Frequency Stability $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year at 25°C

Electrical Parameters

- Supply Voltage $2.5\text{V} \pm 5\%$

Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility LVDS
- Drive Capability 100Ω
- Differential Output Voltage (VoD): 0.247V min, 0.330V typ, 0.454V max.
- Offset Voltage (VOS): 1.125V min, 1.250V typ, 1.375V max.
- Output Voltage Levels:
Output Low (VoL): 0.9V min
Output High (VoH): 1.6V max

Output Control

- Enable/Disable:
Logic '1' ($\geq 70\%$ Vs) to pad 1 enables oscillator output.
Logic '0' ($\leq 30\%$ 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: $10\mu\text{A}$ max

Noise Parameters

- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

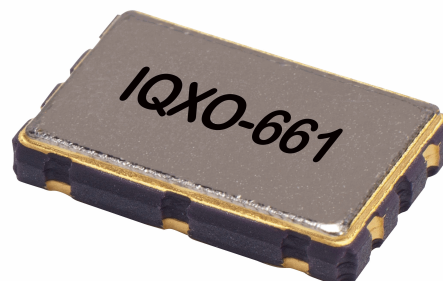
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G , 0.5ms , half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

Ordering Information

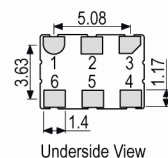
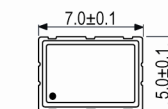
- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
 100.0MHz IQXO-661
LVDS $\pm 50\text{ppm}$ -10 to 70°C 2.5V

Compliance

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



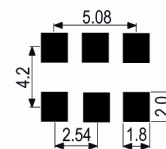
Outline (mm)



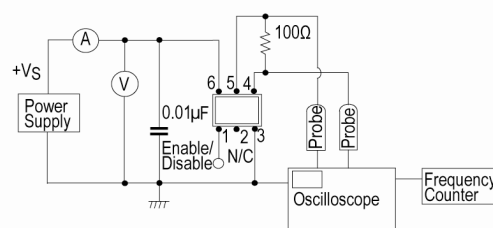
Underside View

Pad Connections
1. Enable/Disable
2. N/C
3. GND
4. Output +
5. Output -
6. +Vs

Solder Pad Layout



Test Circuit

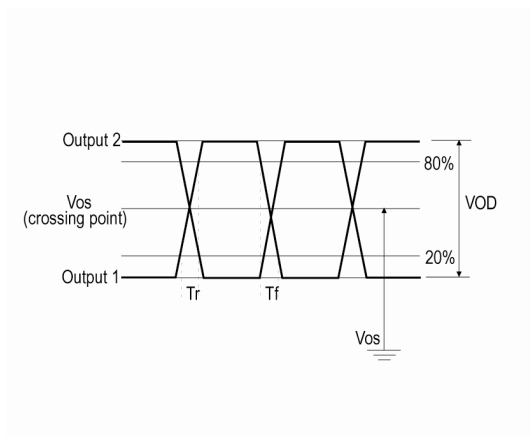


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Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Wave Form



Electrical Specification - maximum limiting values 2.5V $\pm$ 5%

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
15.0MHz	99.999999MHz	-10 to 70	$\pm$ 25.0	50	1	45/55%
		-40 to 85	$\pm$ 25.0	50	1	45/55%
100.0MHz	160.0MHz	-10 to 70	$\pm$ 25.0	50	0.5	45/55%
		-40 to 85	$\pm$ 25.0	50	0.5	45/55%

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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Электронная почта: org@eplast1.ru

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