

ISSUE 3; July 2024

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

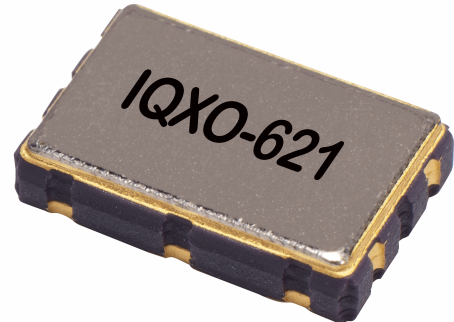
- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

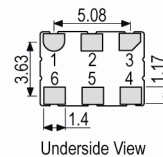
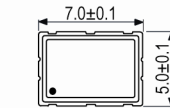
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202, Method 213, Condition E: 1000G, 0.5ms, half sine wave.
- Vibration: MIL-STD-883, Method 2007, Condition A: 20G

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

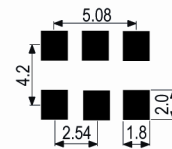


Outline (mm)

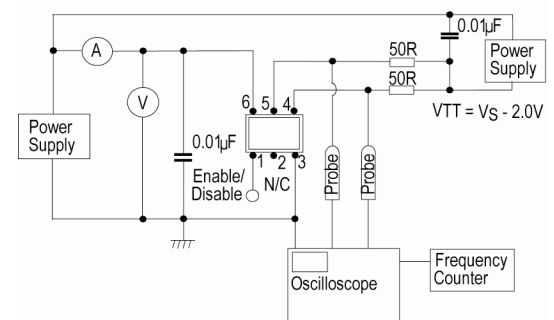


- Pad Connections
1. Enable/Disable
 2. N/C
 3. GND
 4. Output +
 5. Output -
 6. +Vs

Solder Pad Layout



Test Circuit



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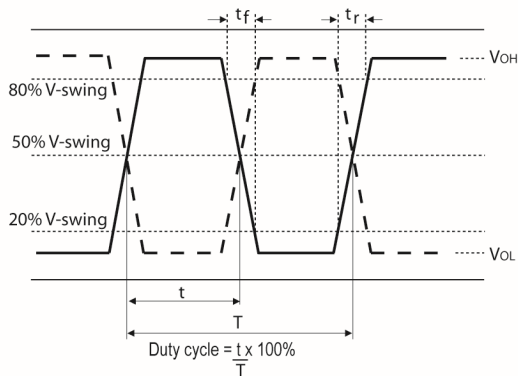
Compliance

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

Packaging Details

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

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%

This document was correct at the time of printing; please contact your local sales office for the latest version.

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