



ISSUE 1; August 2014 - RoHS 2011/65/EU

Description

- LVDS output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed in a 7x5mm ceramic package with a seam sealed metal lid. Replacement for the CFPS-61 package.



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): 0.33V typ
- Offset Voltage (VOS): 1.25V typ

Output Control

- Standby Operation:
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

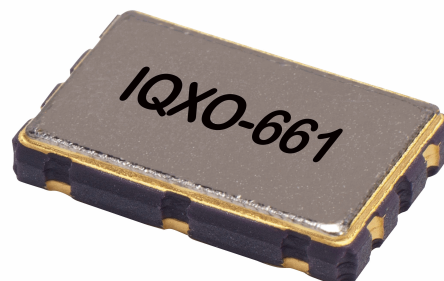
- Phase Jitter (12kHz to 20MHz): 1ps rms max

Environmental Parameters

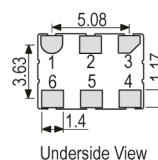
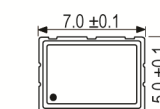
- Shock: MIL-STD-202, Method 213, Condition E: 1000G , 0.5ms , $1/2$ sine wave
- Vibration: MIL-STD-883, Method 2007: 20G
- Storage Temperature Range: -55 to 125°C

Ordering Information

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



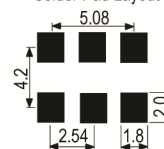
Outline (mm)



Pad Connections

1. Standby
 2. N/C
 3. GND
 4. Output 1
 5. Output 2
 6. +Vs
- Note: a $0.01\mu\text{F}$ or $0.1\mu\text{F}$ capacitor is recommended between GND & +Vs

Solder Pad Layout



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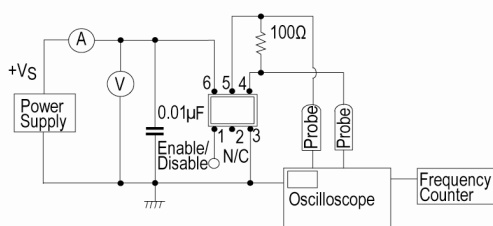
Compliance

- RoHS Status Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

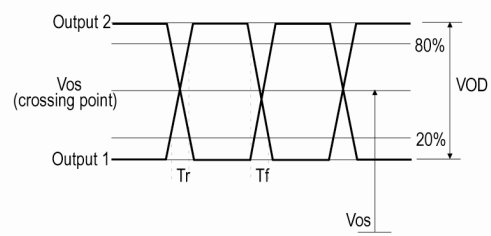
Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Bulk Loose in bulk pack
Pack Size: 100

Test Circuit



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	-40 to 85	$\pm$ 25.0	50	1	45/55
		-10 to 70	$\pm$ 25.0	50	1	45/55
100.0MHz	160.0MHz	-40 to 85	$\pm$ 25.0	50	0.5	45/55
		-10 to 70	$\pm$ 25.0	50	0.5	45/55

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