



ISSUE 10; February 2012 - RoHS 2011/65/EU



## Description

- PLL based, one time only factory programmable for a fast lead time
- Crystal oscillator in a hermetically sealed ceramic package with a metal lid
- See CFPS-39 for standard crystal oscillator alternative
- See IQMS-520 for MEMS oscillator alternative

## Frequency Range

- Frequency 1.0 to 110.0MHz

## Supply Voltage

- Voltage 3.3V  $\pm 10\%$

## Output Compatibility & Load

- Output Compatibility CMOS
- Drive Capability 15pF max

## Frequency Stabilities

- Frequency Stability  $\pm 20\text{ppm}$ ,  $\pm 25\text{ppm}$ ,  $\pm 50\text{ppm}$

## Operating Temperature Ranges

- -20 to 70°C
- -10 to 60°C
- -40 to 85°C

## Electrical Parameters

- Standby Current: 10 $\mu$ A max
- Start Up Time: 8ms max

## Frequency Stability

- All frequency stabilities are inclusive of tolerance, supply voltage variation, load variation, 1st year ageing, shock and vibration.

## Output Control

- Logic '1' (>70%Vs) to pad 1 enables oscillator output
- Logic '0' (<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

## Noise Parameter

- Period Jitter: 150ps max

## Environmental Parameters

- Storage Temperature Range: -55 to 125°C

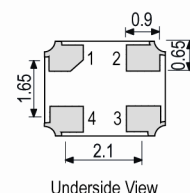
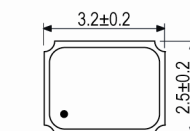
## Ordering Information (\*minimum required)

- Frequency\*
- Model\*
- Output Compatibility
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- (\*minimum required)
- Example
- 20.0MHz CFPP-39
- CMOS  $\pm 50\text{ppm}$  -40 to 85C 3.3V

## Packing Details



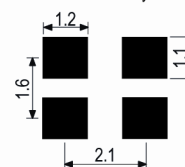
## Outline (mm)



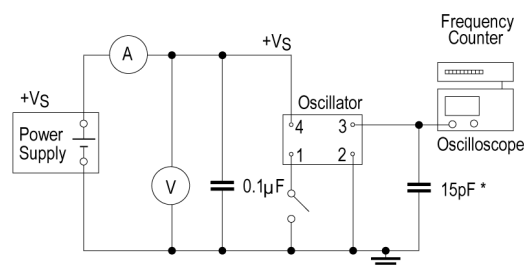
## Pad Connections

1. Standby
2. GND
3. Output
4. +Vs

## Solder Pad Layout



## Test Circuit



\* Inclusive of jigging and equipment capacitance

## Sales Office Contact Details:

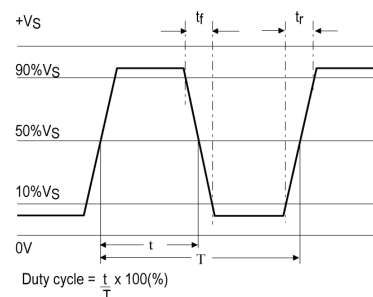
UK: +44 (0)1460 270200  
Germany: +49 (0)7264 9145-0

France: Opening 6th March 2012  
USA: +1 (0) 650 798 5047

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)



- Pack Style: **Bulk**                      Loose in bulk pack
- Pack Size                                  1
- Pack Style: **Reel**                      Tape and reel in accordance with EIA-481-D
- Pack Size                                  1,000
- Alternative packing options available

**Output Waveform****Electrical Specification - maximum limiting values 3.3V ±10%**

Frequency Range	Temp Range	Stability		Current Draw	Rise & Fall (10 to 90%)	Duty Cycle %
		Min	Max			
1.0 to <20.0MHz	-10 to 60°C	±20ppm	±100ppm	10.0mA	5ns	45/55%
	-20 to 70°C	±25ppm	±100ppm	10.0mA	5ns	45/55%
	-40 to 85°C	±50ppm	±100ppm	10.0mA	5ns	45/55%
20.0 to <40.0MHz	-10 to 60°C	±20ppm	±100ppm	15.0mA	5ns	45/55%
	-20 to 70°C	±25ppm	±100ppm	15.0mA	5ns	45/55%
	-40 to 85°C	±50ppm	±100ppm	15.0mA	5ns	45/55%
40.0 to <75.0MHz	-10 to 60°C	±20ppm	±100ppm	15.0mA	5ns	45/55%
	-20 to 70°C	±25ppm	±100ppm	15.0mA	5ns	45/55%
	-40 to 85°C	±50ppm	±100ppm	15.0mA	5ns	45/55%
75.0 to <90.0MHz	-10 to 60°C	±20ppm	±100ppm	20.0mA	5ns	45/55%
	-20 to 70°C	±25ppm	±100ppm	20.0mA	5ns	45/55%
	-40 to 85°C	±50ppm	±100ppm	20.0mA	5ns	45/55%
90.0 to <110.0MHz	-10 to 60°C	±20ppm	±100ppm	25.0mA	5ns	45/55%
	-20 to 70°C	±25ppm	±100ppm	25.0mA	5ns	45/55%
	-40 to 85°C	±50ppm	±100ppm	25.0mA	5ns	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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