



ISSUE 6; September 2012 - RoHS 2011/65/EU



### Description

- Standard 5 x 3.2 crystal oscillator.
- Ceramic package with a seam sealed metal lid, hermetically sealed.
- Please see our CFPS-12 for a 5.0V version of this package.
- Please see our CFPS-37 for a 2.5V version of this package.
- Please see our CFPS-69 for a low current version of this package.
- Fast Make capability: CFPS-9 programmable oscillator as the nearest equivalent fast make model.
- MEMS capability: IQMS-510 series oscillators are the nearest equivalent MEMS model.

### Frequency Range

- Frequency 0.5 to 160.0 MHz

### Supply Voltage

- Voltage 3.3V ±0.3V

### Ageing

- Ageing ±3ppm max per year @ 25°C

### Output Compatibility & Load

- Output Compatibility CMOS
- Drive Capability 15pF max

### Frequency Stabilities

- Frequency Stability ±25ppm, ±100ppm  
(inclusive of supply voltage and output load variations over the operating temperature range)

### Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

### Output Control

- Standby Operation:  
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  
Standby Current: 10µA max

### Environmental Parameters

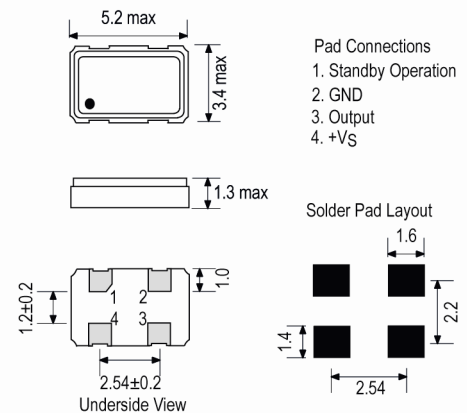
- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202F, Method 213B: 1000G, 0.5ms, 1/2 sine wave
- Vibration: MIL-STD-202F, Method 204D, Test Condition D: 20G (10Hz-2000Hz), 4hrs in 3 mutually perpendicular planes (total 12hrs)

### Ordering Information (\*minimum required)

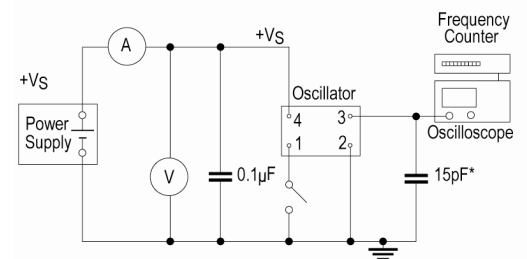
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- Example:  
10.0MHz CFPS-9  
CMOS ±50ppm -10 to 70C 3.3V



### Outline (mm)



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### Sales Office Contact Details:

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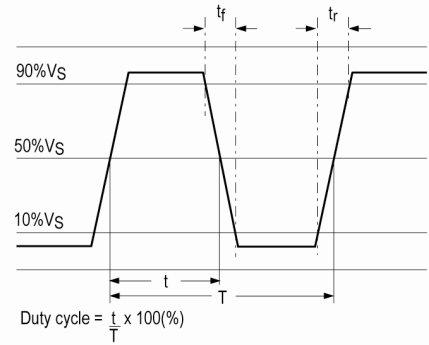
Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
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**Packing Details**

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

**Wave Form**



**Electrical Specification - maximum limiting values 3.3V ±0.3V**

| Frequency Range      | Temp Range  | Stability Inclusive |         | Current Draw | Rise & Fall (10 to 90%) | Duty Cycle % |
|----------------------|-------------|---------------------|---------|--------------|-------------------------|--------------|
|                      |             | Min                 | Max     |              |                         |              |
| 0.5 to 9.999999MHz   | -10 to 70°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
| 10.0 to 19.999999MHz | -10 to 70°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
| 20.0 to 31.999999MHz | -10 to 70°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
| 32.0 to 49.999999MHz | -10 to 70°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 20.0mA       | 10ns                    | 40/60%       |
| 50.0 to 79.999999MHz | -10 to 70°C | ±25ppm              | ±100ppm | 30.0mA       | 8ns                     | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 30.0mA       | 8ns                     | 40/60%       |
| 80.0 to 99.999999MHz | -10 to 70°C | ±25ppm              | ±100ppm | 40.0mA       | 5ns                     | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 40.0mA       | 5ns                     | 40/60%       |
| 100.0 to 160.0MHz    | -10 to 70°C | ±25ppm              | ±100ppm | 50.0mA       | 4ns                     | 40/60%       |
|                      | -40 to 85°C | ±25ppm              | ±100ppm | 50.0mA       | 4ns                     | 40/60%       |

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

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