



ISSUE 5; February 2012 - RoHS 2011/65/EU



### Description

- Low supply current crystal oscillators
- Ceramic package with a seam sealed metal lid, hermetically sealed
- Please see our CFPS-9 package for standard 5 x 3.2 oscillators

### Frequency Range

- Frequency 1.8 to 50.0MHz

### Supply Voltage

- Voltage 3.3V  $\pm 5\%$

### Ageing

- Ageing  $\pm 3\text{ppm}$  max per year

### Output Compatibility & Load

- Output Compatibility CMOS
- Drive Capability 15pF max

### Frequency Stabilities

- Frequency Stability  $\pm 25\text{ppm}$ ,  $\pm 50\text{ppm}$ ,  $\pm 100\text{ppm}$

### Operating Temperature Ranges

- 40 to 85°C
- 10 to 70°C

### Electrical Parameters

- Standby Current: 1 $\mu$ A max

### 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 the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output

### 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)

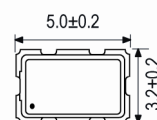
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- (\*minimum required)
- Example
- 20.0MHz CFPS-69
- CMOS  $\pm 50\text{ppm}$  -10 to 70C 3.3V

### Packing Details

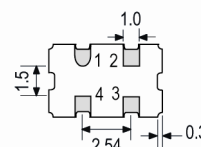
- Pack Style: **Bulk** Loose in bulk pack
- Pack Size 100
- Pack Style: **Reel** Tape and reel in accordance with EIA-481-D
- Pack Size 1,000



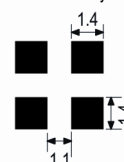
### Outline (mm)



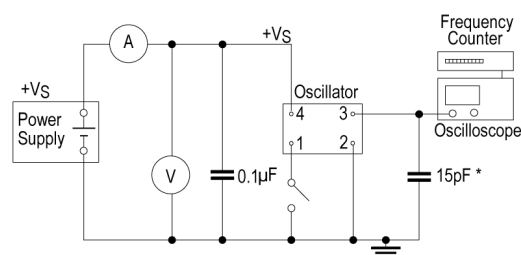
Pad Connections  
1. Standby Operation  
2. GND  
3. Output  
4. +VS



### Solder Pad Layout



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### Sales Office Contact Details:

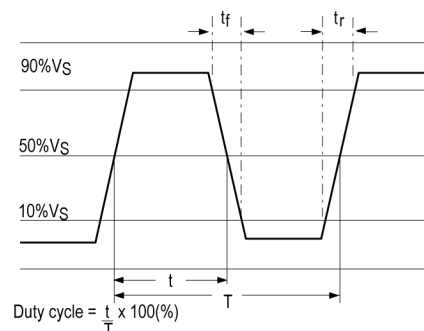
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- Alternative packing options available

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

| Frequency Range   | Temp Range  | Stability   |              | Current Draw | Rise & Fall (10 to 90%) | Duty Cycle % |
|-------------------|-------------|-------------|--------------|--------------|-------------------------|--------------|
|                   |             | Min         | Max          |              |                         |              |
| 1.80 to <32.0MHz  | -10 to 70°C | $\pm$ 25ppm | $\pm$ 100ppm | 4.5mA        | 12.0ns                  | 45/55%       |
|                   | -40 to 85°C | $\pm$ 50ppm | $\pm$ 100ppm | 4.5mA        | 12.0ns                  | 45/55%       |
| 32.00 to <50.0MHz | -10 to 70°C | $\pm$ 25ppm | $\pm$ 100ppm | 6.0mA        | 12.0ns                  | 45/55%       |
|                   | -40 to 85°C | $\pm$ 50ppm | $\pm$ 100ppm | 6.0mA        | 12.0ns                  | 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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