

## Customer Part:

### Description

- 5 x 3.2mm crystal oscillator  
Ceramic package with a seam sealed metal lid, hermetically sealed
- Model CFPS-9
- Model Issue number 8
- Note: please be aware that devices supplied against this model may show slight cosmetic differences depending upon the frequency and specification, however all electrical details remain as per the model specification.

### Frequency Parameters

- Frequency 24.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing  $\pm 3\text{ppm}$  max per year @  $25^\circ\text{C}$

### Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 0.3\text{V}$
- Current Draw 20.000mA

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 10.0ns max
- Duty Cycle 40/60%
- Start up time: 10ms max  
0.8ms typ to 90% of final amplitude (under ideal conditions @  $25^\circ\text{C}$ )

### Output Control

- Enable/Disable 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: 10 $\mu\text{A}$  max, 0.9 $\mu\text{A}$  typ @  $25^\circ\text{C}$

### Environmental Parameters

- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- 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)

### Manufacturing Details

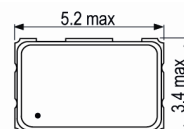
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260^\circ\text{C}$  10s max

### Compliance

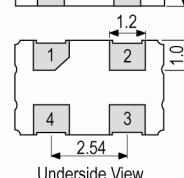
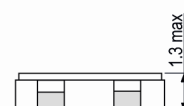
- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



### Outline (mm)

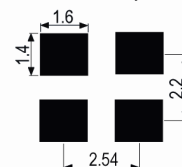


Pad Connections  
1. Enable/Disable  
2. GND  
3. Output  
4. +Vs

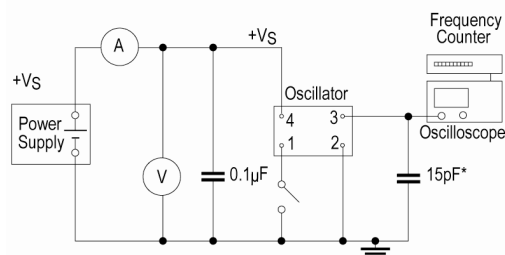


Underside View

### Solder Pad Layout



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### Sales Office Contact Details:

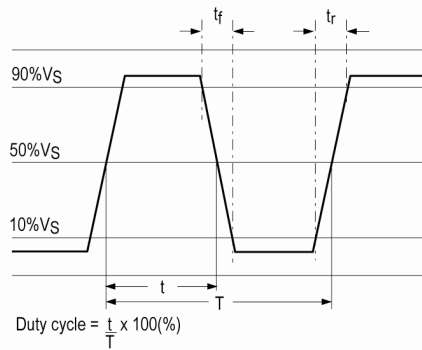
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Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

**Customer Part:****Packaging Details**

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- *Alternative packing option available*

**Wave Form****Sales Office Contact Details:**

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

France: 0800 901 383  
USA: +1.760.318.2824

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