


**Description**

- Surface mount 3.2 x 2.5mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid.
- Model CFPS-39
- Model Issue number 5

**Frequency Parameters**

- Frequency 20.0MHz
- 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  $3.3\text{V} \pm 10\%$
- Current Draw 12.000mA

**Output Details**

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 5.0ns max
- Duty Cycle 45/55%

**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:  $10\mu\text{A}$  max  
 Start-Up Time: 10ms max

**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**

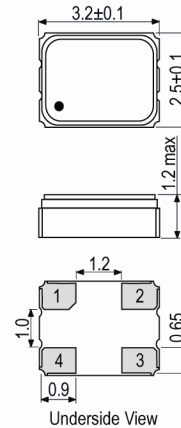
- Maximum Process Temperature:  $260^\circ\text{C}$  (10secs max)
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260\text{degC}$  10s

**Compliance**

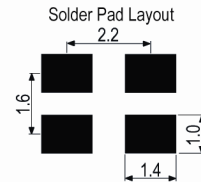
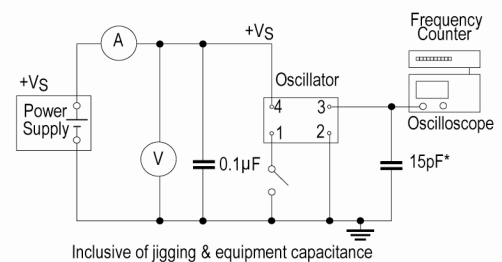
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

**Packaging Details**

- Pack Style: Bulk Loose in bulk pack  
Pack Size: 100
- Alternative packing option available


**Outline (mm)**


- Pad Connections**
- Enable/Disable
  - GND
  - Output
  - +Vs

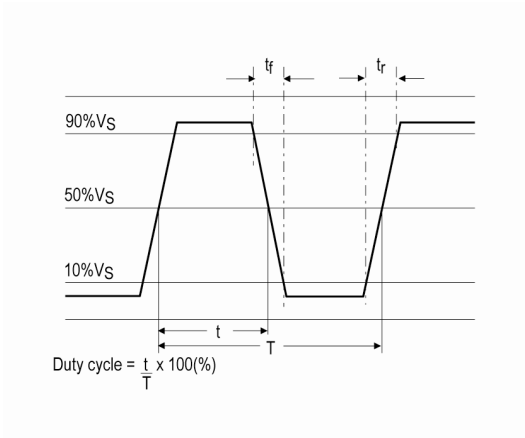

**Test Circuit**

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**Wave Form**



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