

**Customer Part:**

**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 6

**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 Low Vol: 10% Vs max  
Output High Voh: 90% Vs min
- Start-Up Time: 10ms max.  
0.7ms typ to 90% of final amplitude (under ideal conditions @  $25^\circ\text{C}$ )

**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: 10 $\mu\text{A}$  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**

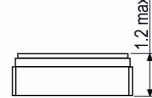
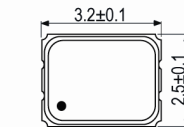
- RoHS Terminations NiAu
- RoHS Reflow Temp 260degC max for 10s max

**Compliance**

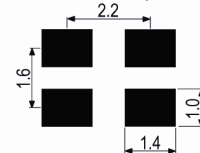
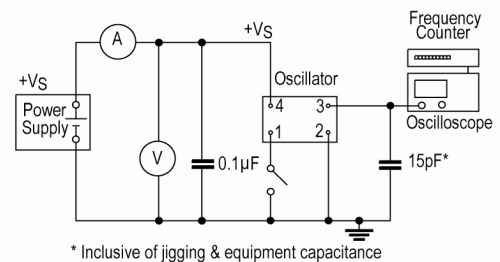
- RoHS Status (2015/863/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

**Packaging Details**

- Pack Style: Cutt In tape, cut from a reel
- Pack Size: 100


**Outline (mm)**


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

**Solder Pad Layout**

**Test Circuit**

**Sales Office Contact Details:**

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**Customer Part:**

- Alternative packing option available

**Wave Form**



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