

**Customer Part:**

**Description**

- Low supply current crystal oscillators  
Ceramic package with a seam sealed metal lid, hermetically sealed
- Model CFPS-69
- Model Issue number 5

**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

**Electrical Parameters**

- Supply Voltage  $3.3\text{V} \pm 5\%$
- Current Draw  $4.500\text{mA}$
- Standby Current:  $1\mu\text{A}$  max

**Output Details**

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $12.0\text{ns}$  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 the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output

**Environmental Parameters**

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

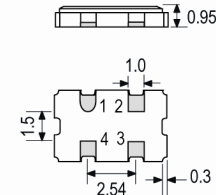
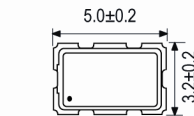
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260\text{degC}$  10s

**Compliance**

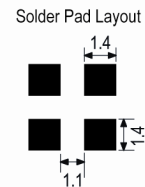
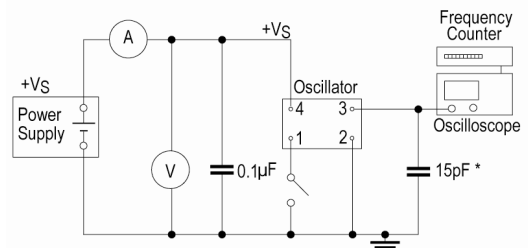
- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

**Packaging Details**

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


**Outline (mm)**


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


**Test Circuit**


\* Inclusive of jigging and equipment capacitance

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Customer Part:

Wave Form



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