

**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  $20.000\text{mA}$

**Output Details**

- Output Compatibility CMOS
- Drive Capability  $15\text{pF}$  max
- Rise and Fall Time  $10.0\text{ns}$  max
- Duty Cycle  $40/60\%$
- Start up time:  $10\text{ms}$  max  
 $0.8\text{ms}$  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**

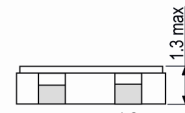
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Shock: MIL-STD-202F, Method 213B:  $1000\text{G}$ ,  $0.5\text{ms}$ ,  $1/2$  sine wave
- Vibration: MIL-STD-202F, Method 204D, Test Condition D:  $20\text{G}$  ( $10\text{Hz}$ - $2000\text{Hz}$ ),  $4\text{hrs}$  in 3 mutually perpendicular planes (total  $12\text{hrs}$ )

**Manufacturing Details**

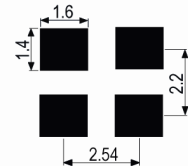
- RoHS Terminations NiAu
- RoHS Reflow Temp  $260^\circ\text{C}$  10s max

**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

**Solder Pad Layout**

**Test Circuit**


\* Inclusive of jiggging and equipment capacitance

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**Customer Part:**

**Packaging Details**

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

**Wave Form**



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