

**Customer Part:**

**Description**

- Standard 7 x 5mm crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed.
- Model CFPS-73
- Model Issue number 14

**Frequency Parameters**

- Frequency 20.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing  $\pm 3\text{ppm}$  per year max

**Electrical Parameters**

- Supply Voltage  $3.3\text{V} \pm 10\%$
- Current Draw  $12.000\text{mA}$
- Note: parameters are referenced to  $15\text{pF}$  load

**Output Details**

- Output Compatibility HCMOS
- Drive Capability  $15\text{pF}$  std,  $50\text{pF}$  max
- Rise and Fall Time  $10.0\text{ns}$  max
- Duty Cycle 45/55
- Start up time:  $10\text{ms}$  max.  
 $0.9\text{ms}$  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; 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 @  $25^\circ\text{C}$

**Noise Parameters**

- Phase Noise @125MHz (typical):  
10Hz -54dBc  
100Hz -92dBc  
1kHz -130dBc  
10kHz -149dBc  
100kHz -159dBc  
1MHz -163dBc
- RMS Phase Jitter @125MHz:  $52\text{fs}$  typical

**Environmental Parameters**

- Shock: MIL-STD-202, Method 213, Condition E
- Vibration: MIL-STD-883, Method 2007, Condition A
- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$

**Manufacturing Details**

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


**Outline (mm)**

**Test Circuit**


\* Inclusive of jigging and equipment capacitance

**Sales Office Contact Details:**

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**Customer Part:**

**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*

**Wave Form**



**Phase Noise / Jitter**



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