

**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 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 20.0MHz
- Frequency Stability ±25.00ppm
- Operating Temperature Range -40.00 to 85.00°C
- Ageing ±5ppm max per year @ 25°C

**Electrical Parameters**

- Supply Voltage 3.3V ±10%
- Current Draw 20.000mA

**Output Details**

- Output Compatibility CMOS
- Drive Capability 15pF max
- Rise and Fall Time 7.0ns max
- Duty Cycle 40/60
- Output Low VoL: 10% Vs max
- Output High VoH: 90% Vs min
- Start-Up Time: 10ms max

**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: 10µA max

**Noise Parameters**

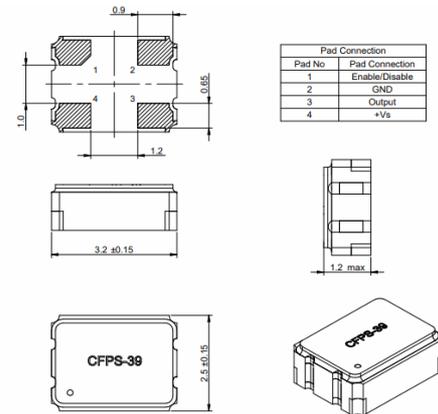
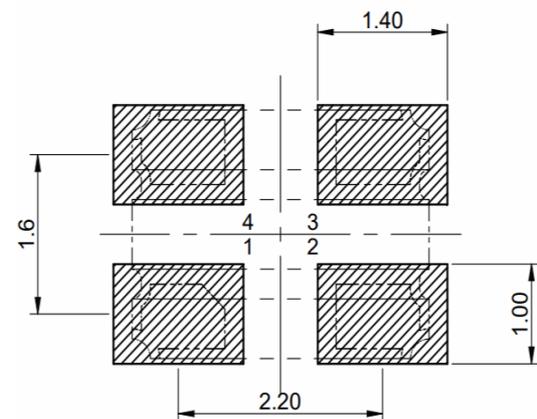
- RMS Phase Jitter:  
 Frequency range 10MHz to 39.9MHz:  
 Phase Jitter (12kHz to 5MHz): 1ps rms max  
 Frequency range 40MHz to 125MHz:  
 Phase Jitter (12kHz to 20MHz): 1ps rms max

**Environmental Parameters**

- Storage Temperature Range: -55 to 125°C
- Shock: Half Sine shock pulse with peak acceleration 500g;  
 Pulse duration: 0.3ms
- Vibration: MIL-STD-202 Method 204. 5g for 20 minutes, 12 cycles in each of the 3 orientations, 10 - 2000 Hz. As per Table 11 of AEC-Q200.

**Manufacturing Details**

- RoHS Terminations NiAu
- RoHS Reflow Temp 260°C max for 10s max


**Outline (mm)**

**Recommended Solder Pad Layout**

**Sales Office Contact Details:**

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 Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

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**Customer Part:**

**Compliance**

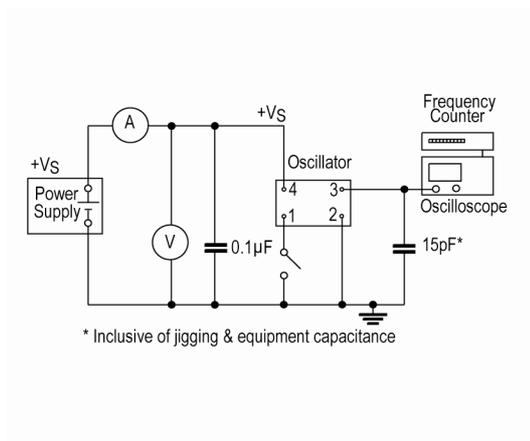
- RoHS Status (2015/863/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

**Packaging Details**

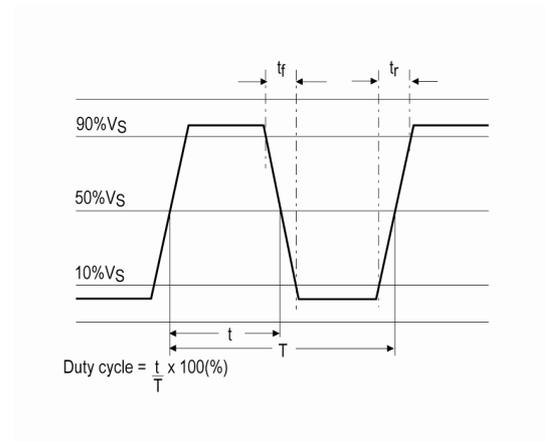
- Tape & reel in accordance with EIA-481  
Quantities below the standard reel size to be supplied on cut tape

Standard Pack Quantity: 3,000

**Test Circuit**



**Waveform**



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