

CFPS-53, -54, -55, -56 SMD CLOCK OSCILLATORS

ISSUE 4; 6 JANUARY 2009 - RoHS 2002/95/EC

Description

- Surface mount oscillators in a ceramic package with a hermetically sealed metal lid available in a range of voltages

Fast Make Capability

- Please see CFPP-54, -56, -58 series Programmable Oscillators for nearest equivalent fast make parts

Package Outline

- 2.5 x 2mm

Frequency Range

- 0.75 to 50MHz

Output Compatibility & Load

- Tri-state CMOS
- Drive Capability 15pF max

Frequency Stabilities

- ±30ppm, ±50ppm, ±100ppm (inclusive of supply voltage output load variations over the operating temperature range)

Operating Temperature Ranges

- 20 to 70°C (CFPS-53, -54, -55, -56)
- 40 to 85°C (CFPS-53I, -54I, -55I, -56I)

Storage Temperature Range

- 55 to 100°C

Tri-state Operation

- Logic '1' (>80%Vs) to pad 1 enables oscillator output
- Logic '0' (<20% 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

Supply Voltage

- 1.8V CFPS-53
- 2.5V CFPS-54
- 3.0V CFPS-55
- 3.3V CFPS-56

Phase Jitter - examples:

- 12.0MHz 0.27ps rms (12kHz - 5MHz) typical
- 22.50MHz 0.46ps rms (12kHz - 10MHz) typical
- 40.0MHz 0.38ps rms (12kHz - 20MHz) typical

Environmental

- Drop: free fall from 100cm, 3 times onto hard wooden surface
- Vibration: 10-36Hz, 1.5mm amplitude, 36-55Hz, 4G sweep time 1min/oct, duration 2hrs for each X, Y & Z axes

Marking Includes

- Frequency

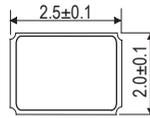
Packaging

- Bulk or Tape and Reel

Minimum Order Information Required

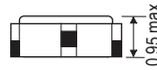
- Frequency + Model Number + Operating Temperature Code + Frequency Stability

Outline (mm)

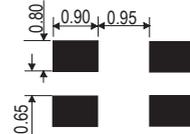
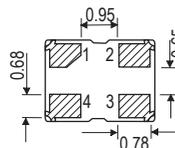


Pad Connections

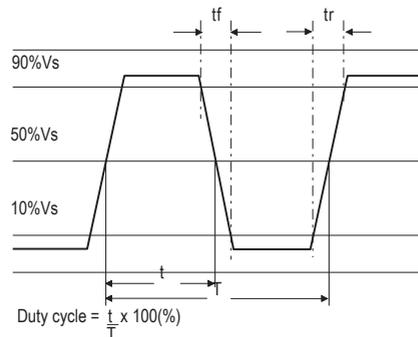
- Enable/Disable
- GND
- Output
- +Vs



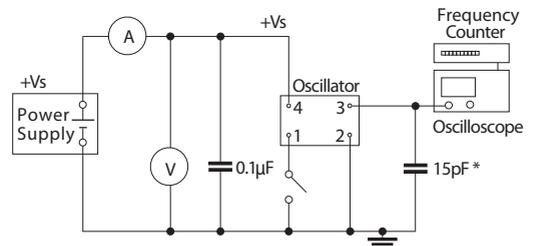
Solder pad layout



Output Waveform



Test Circuit



* Inclusive of jiggling & equipment capacitance

CLOCK OSCILLATORS

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
0.75 to <20.0MHz	±30ppm, ±50ppm, ±100ppm	1.8V ±5%	2.5mA	10ns	10ns	45/55%	CFPS-53
20. to <40.0MHz			3.0mA				CFPS-53I
40. to 50.0MHz			3.5mA				
0.75 to <20.0MHz	2.5V ±5%	4.5mA	4.5mA			40/60%	CFPS-54 CFPS-54I
20. to <40.0MHz			5.5mA				
40. to 50.0MHz			6.5mA				
0.75 to <20.0MHz	3.0V ±5%	5.5mA	5.5mA			45/55%	CFPS-55 CFPS-55I
20. to <40.0MHz			6.5mA				
40. to 50.0MHz			7.5mA				
0.75 to <20.0MHz	3.3V ±5%	6.0mA	6.0mA	CFPS-56 CFPS-56I			
20. to <40.0MHz			7.0mA				
40. to 50.0MHz			8.0mA				

Ordering Example 24.0MHz CFPS-56 | C

Frequency _____

Model No. _____

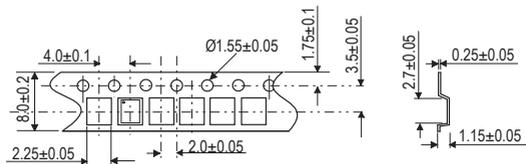
Operating Temperature Code: I = -40 to 85°C; not applicable for -20 to 70°C _____

Frequency Stability: H = ±30ppm, B = ±50ppm, C = ±100ppm _____

Please note that the rise and fall times listed are the maximum values we specify to cover various frequency breaks. In practice the actual values are generally lower depending upon the spot frequency chosen. For typical values please contact our sales office.

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Tape (mm)



Reel (mm)

