

CFPS-34 SMD CLOCK OSCILLATORS

ISSUE 4; 24 JULY 2009 - RoHS 2002/95/EC

Description

- 3.3V surface mount oscillator in a ceramic package, with a hermetically sealed metal lid and LVPECL outputs

Package Outline

- 7 x 5mm

Frequency Range

- 40 to 270MHz

Output Compatibility & Load

- LVPECL
- Output Load 50Ω terminated to Vs-2.0V

Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (inclusive of supply voltage and output load variations over the operating temperature range)

Operating Temperature Ranges

- 10 to 70°C (CFPS-34)
- 40 to 85°C (CFPS-34I)

Storage Temperature Range

- 55 to 125°C

Tri-state 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

Stand-by Current

- 30µA max

Start-Up Time

- 10ms max

Output Voltage

- '0' Level VoL +1.7V max
- '1' Level VoH +2.2V min

Phase Jitter (12kHz to 20MHz)

- 1ps rms max

Environmental

- Drop: natural drop, 3 times, from 30cm onto a hard wooden plate
- Vibration: 10 to 55Hz (amplitude 1.52mm), 20G, X, Y and Z (2 hours each, total 6 hours)

Marking Includes

- Model Number + Frequency

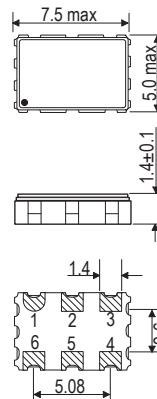
Packaging

- Bulk or Tape and Reel
- Tape & Reel in accordance with EIA-481-D

Minimum Order Information Required

- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

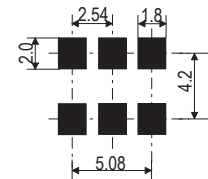
Outline (mm)



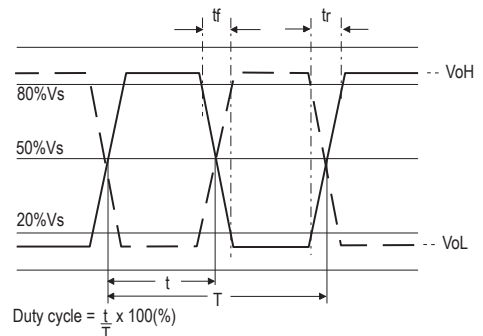
Pad Connections

- Enable/Disable
- N/C
- GND
- Output 1
- Output 2
- +Vs

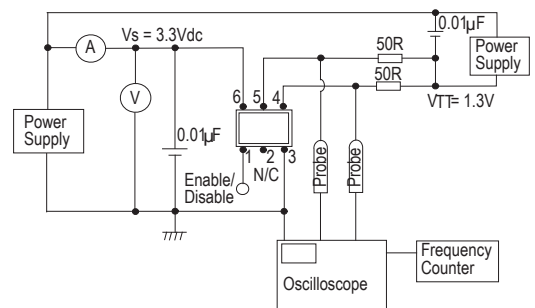
Solder pad layout



Output Waveform



Test Circuit



Electrical Specifications - maximum limiting values

| Frequency Range | Frequency Stability | Supply Voltage | Supply Current | Rise Time (tr) (20-80%) | Fall Time (tf) (80-20%) | Duty Cycle | Model Number | |
|---|-----------------------------|----------------|----------------|----------------------------|----------------------------|------------|--------------|-------------|
| 40.0 to 170.0MHz | ±25ppm*, ±50ppm, ±100ppm | 3.3V±5% | 60mA | 1ns | 1ns | 40/60% | CFPS-34 | |
| >170.0 to 270.0MHz | | | 88mA | | | | CFPS-34I | |
| Ordering Example | | | | | | | 100.0MHz | CFPS-34 I C |
| Frequency _____ | | | | | | | | |
| Model No. _____ | | | | | | | | |
| Operating Temperature Code: I = -40 to 85°C; not applicable for -10 to 70°C _____ | | | | | | | | |
| Frequency Stability: A = ±25ppm, B = ±50ppm, C = ±100ppm _____ | | | | | | | | |
| *Note - Code IA, ±25ppm over -40 to 85°C is not available | | | | | | | | |

CLOCK
OSCILLATORS