

# CFPS-9 SMD CLOCK OSCILLATORS

ISSUE 5; 1 NOVEMBER 2008 - RoHS 2002/95/EC

## Description

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

## Fast Make Capability

- Please see CFPP-9 series Programmable Oscillators for nearest equivalent fast make parts

## Package Outline

- 5 x 3.2mm

## Frequency Range

- 1.8 to 160MHz

## Output Compatibility & Load

- Tri-state HCMOS (3.3V)
- Drive Capability 15pF max

## Frequency Stabilities

- $\pm 25\text{ppm}$ ,  $\pm 50\text{ppm}$ ,  $\pm 100\text{ppm}$  (inclusive of supply voltage and output load variations over the operating temperature range)

## Operating Temperature Ranges

- 10 to 70°C (CFPS-9)
- 40 to 85°C (CFPS-9I)

## 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; when disabled the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output

## Standby Current

- 10 $\mu$ A max

## Environmental

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: MIL-STD-202F, Method 204D, Test condition D 20G Frequency range 10-2000Hz, 4 hrs in X, Y & Z axes (total 12 hrs)

## Marking Includes

- Model Number + Frequency

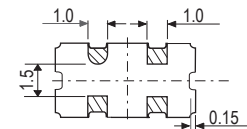
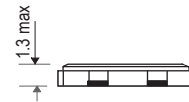
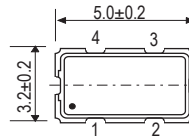
## Packaging

- Bulk or Tape and Reel

## Minimum Order Information Required

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

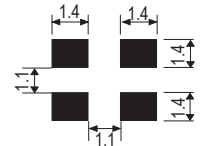
## Outline (mm)



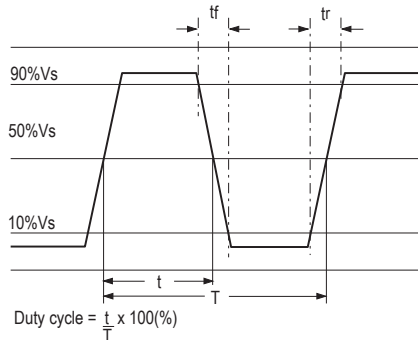
## Pad Connections

1. Enable/Disable
2. GND
3. Output
4. +Vs

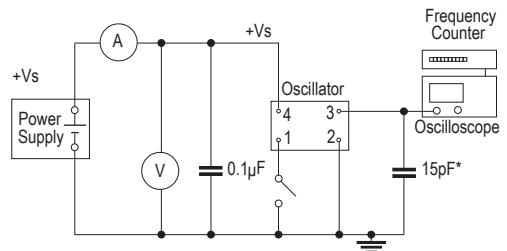
## Solder pad layout



## Output Waveform



## Test Circuit



\* Inclusive of jigging and equipment capacitance

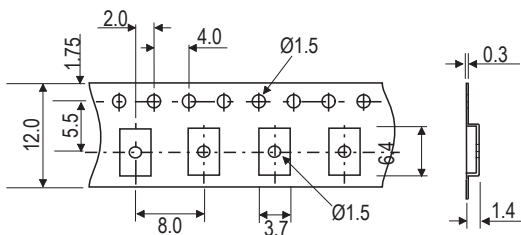
### Electrical Specification - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
1.8 to 50.0MHz	±25ppm*, ±50ppm, ±100ppm	3.3V ±0.3V	20mA	6ns	6ns	45/55%	CFPS-9 CFPS-9I
>50.0 to 80.0MHz			30mA			40/60%	
>80.0 to 125.0MHz			40mA	4ns	4ns		
>125.0 to 160.0MHz			50mA	3ns	3ns		

Ordering Example 24.0MHz CFPS-9 | 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 : ±25ppm over -40 to +85°C (code IA) is only available up to 50.0MHz

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.

### Tape (mm)



### Reel (mm)

