

# CFPS-302, -303 Commercial Oscillator

ISSUE 2; 1 SEPTEMBER 2001

## Delivery Options

- Please contact our sales office for current leadtimes

## Output Compatibility

- HCMOS/LSTTL
- Drive Capability: 15pF or 10LSTTL
- Non tri-state (CFPS-302)
- Tri-state (CFPS-303)

## Package Outline

- 8-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seal. Available over 0 to 70°C (CFPS-302, -303) or -40 to 85°C (CFPS-302I, -303I)

## Standard Frequency Stabilities

- $\pm 25$ ppm,  $\pm 50$ ppm,  $\pm 100$ ppm (over operating temperature range)

## Operating Temperature Ranges

- 0 to 70°C (CFPS-302, -303)
- -40 to 85°C (CFPS-302I, -303I)

## Storage Temperature Range

- -55 to 125°C

## Environmental Specification

- Terminal Strength: 0.91kg max. Force perpendicular to top & bottom
- Hermetic Seal: not to exceed  $1 \times 10^{-9}$  mBar litres of Helium leakage
- Solderability: MIL-STD-202E, Method 208C
- Vibration: 10 to 55Hz 0.76mm displacement, sweep 60 seconds, duration 2 hours
- Rapid Change of Temperature over Operating Temperature Range: 10 cycles
- Shock:  $981 \text{m/s}^2$  for 6ms, three shocks in each direction along the three mutually perpendicular planes

## Tri-state Operation (CFPS-303)

- Logic '0' to pin 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection or Logic '1' to pin 1 enables oscillator output
- Maximum 'pull-down' resistance required to disable output = 20k $\Omega$
- Disable current 50 $\mu$ A typical

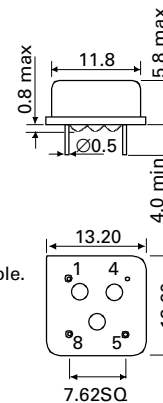
## Marking

- Model number + Operating Temperature Code (if applicable)
- Frequency Stability Code
- Frequency
- Date Code (Year/Week)

## Minimum Order Information Required

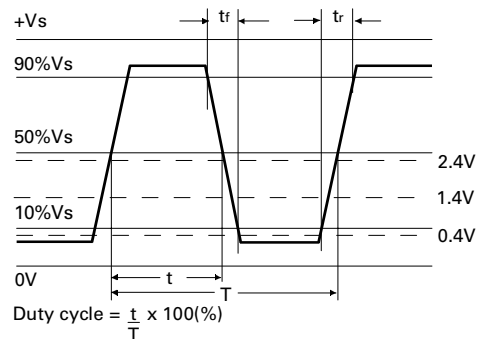
- Frequency + Model Number + Operating Temperature (if applicable) + Frequency Stability

## Outline in mm



Pin connections  
 1. N/C or Enable/Disable.  
 4. GND  
 5. Output  
 8. +Vs

## Output Waveform - HCMOS/LSTTL



**Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.**

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time( $t_r$ )	Fall Time( $t_f$ )	Duty Cycle	Model Number
500.0kHz to 20.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$3.3\text{V} \pm 0.33\text{V}$	10mA	10ns	10ns	40/60%	CFPS-302, -303
> 20.0 to 25.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$3.3\text{V} \pm 0.33\text{V}$	20mA	10ns	10ns	40/60%	CFPS-302, -303
> 25.0 to < 70.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$3.3\text{V} \pm 0.33\text{V}$	20mA	6ns	6ns	40/60%	CFPS-302, -303
70.0 to 160.0MHz	$\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$	$3.3\text{V} \pm 0.33\text{V}$	40mA	3ns	3ns	40/60%	CFPS-302, -303

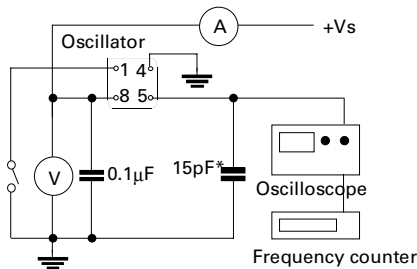
**Ordering Example**

Frequency 22.0MHz CFPS-302 B  
 Model number -302 = Non tri-state, -303 = Tri-state  
 Operating Temperature Code: I = -40 to 85°C Not applicable for 0 to 70°C  
 Frequency Stability: A =  $\pm 25\text{ppm}$ , B =  $\pm 50\text{ppm}$ , C =  $\pm 100\text{ppm}$

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

LEADED SPX03

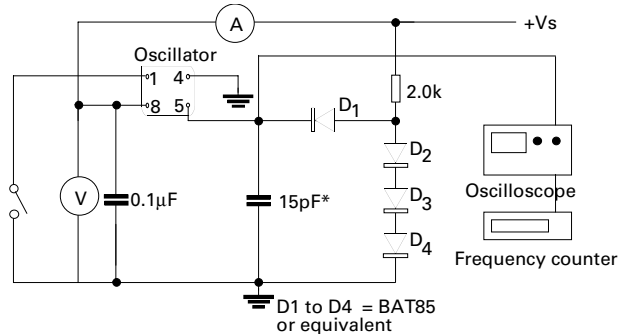
**Test Circuit - HCMOS**



\*Inclusive of jigging & equipment capacitance

Note: Pin 1 = No connection on non tri-state models

**Test Circuit - LSTTL**



\*Inclusive of jigging & equipment capacitance

Note: Pin 1 = No connection on non tri-state models