

CFPS-302, -303 Commercial Oscillator

ISSUE 2: 1 SEPTEMBER 2001

Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

- HCMOS/TTL
- Drive Capability: 15pF or 10TTL (<70.0MHz)
30pF (\geq 70.0 to 160.0MHz)
- 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

- $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$
(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 1×10^{-8} 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: 981m/s² 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 Ω
- Disable current 50 μ A typical

LEADED SPX05

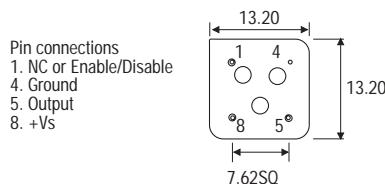
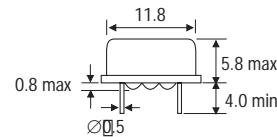
Marking

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

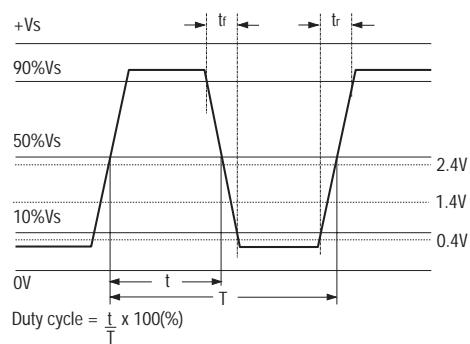
Minimum Order Information Required

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

Outline in mm



Output Waveform - HCMOS/TTL



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	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	3.3V $\pm 0.33\text{V}$	10mA	10ns	10ns	40/60%	CFPS-302, -303
> 20.0 to 25.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	3.3V $\pm 0.33\text{V}$	20mA	10ns	10ns	40/60%	CFPS-302, -303
> 25.0 to < 70.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	3.3V $\pm 0.33\text{V}$	20mA	6ns	6ns	40/60%	CFPS-302, -303
70.0 to 160.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	3.3V $\pm 0.33\text{V}$	40mA	3ns	3ns	40/60%	CFPS-302, -303

Ordering Example

Frequency — 22.0MHz

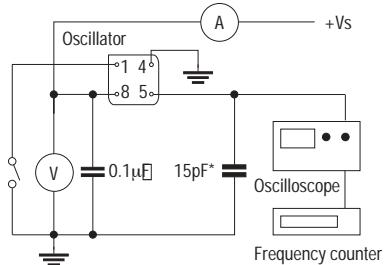
Model number -302 = Non tri-state & 303 = Tri-state CFPS-302I

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 = $\pm 100\text{ppm}$

LEADED SPXOs

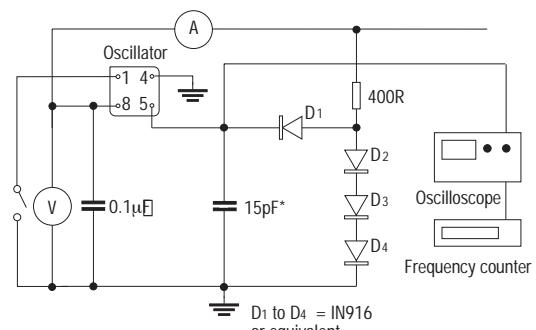
Test Circuit - HCMOS



*Inclusive of jiggling & equipment capacitance

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

Test Circuit - TTL



D₁ to D₄ = IN916 or equivalent