CFPS-304, -305, -306, -307 Commercial Oscillator

ISSUE 1; 28 MAY 1999

Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

- HCMOS/TTL
- Drive Capability: 15pF or 10 TTL
- Non tri-state (CFPS-304, -306)
- Tri-state (CFPS-305, -307)

Package Outline

- 14-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seals. Available over 0 to 70°C (CFPS-304, -305, -306, -307) or –40 to 85°C (CFPS-304I, -305I, -306I, -307I)

Standard Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (over operating temperature range)

Frequency Tolerance at 25°C (Optional)

- ±10ppm, ±25ppm

Operating Temperature Range

- 0 to 70°C (CFPS-304, -305, -306, -307)
- –40 to 85°C (CFPS-304I, -305I, -306I, -307I)

Storage Temperature Range

- –65 to 150°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/s^2 for 6ms, three shocks in each direction along the three mutually perpendicular planes

Tri-state Operation (CFPS-305, -307)

- 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 = 20kΩ
- Disable current 50μA typical

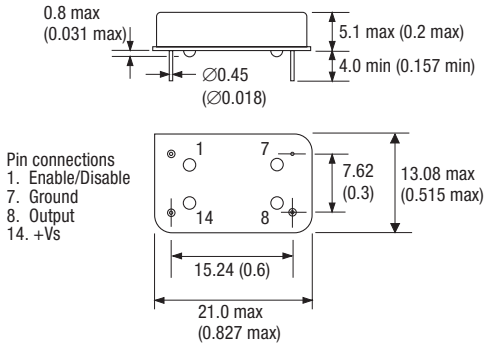
Marking

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

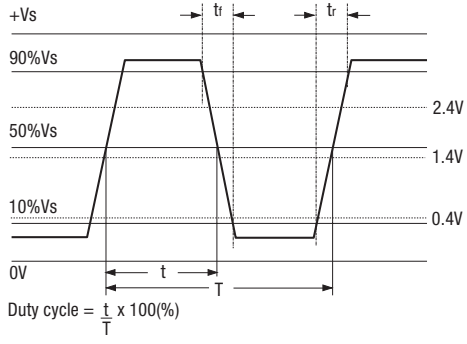
Minimum Order Information Required

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

Outline in mm (inches)



Output Waveform - HCMOS/TTL



Electrical Specification – 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	±25ppm, ±50ppm, ±100ppm	3.0V±0.3V	10mA	10ns	10ns	40/60%	CFPS-304, -305
		3.3V±0.33V					CFPS-306, -307
> 20.0 to 25.0MHz	±25ppm, ±50ppm, ±100ppm	3.0V±0.3V	20mA	10ns	10ns	40/60%	CFPS-304, -305
		3.3V±0.33V					CFPS-306, -307
> 25.0 to 70.0MHz	±25ppm, ±50ppm, ±100ppm	3.0V±0.3V	20mA	6ns	6ns	40/60%	CFPS-304, -305
		3.3V±0.33V					CFPS-306, -307

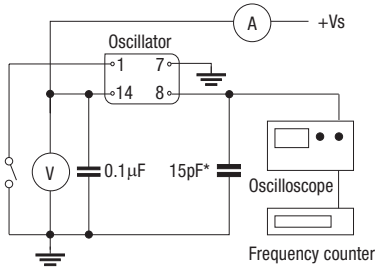
Ordering Example 22.0MHz CFPS-306I B F

Frequency
Model No: -304, -306 = Non tri-state & -305, 307 = Tri-state
Operating Temperature Code: I = –40 to 85°C Not applicable for 0 to 70°C
Frequency Stability: A = ±25ppm; B = ±50ppm; C = ±100ppm
Frequency Tolerance @ 25°C: E = ±10ppm; F = ±25ppm

Please note: Code combination A F is not available

SPXOs

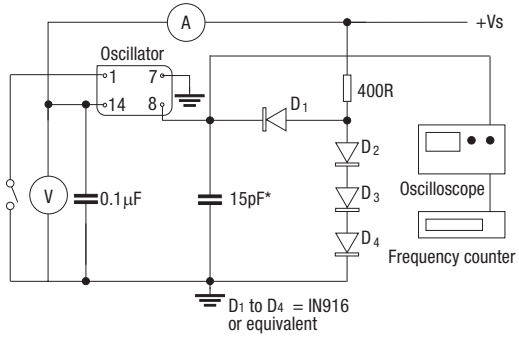
Test Circuit - HCMOS



*Inclusive of jigging & equipment capacitance

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

Test Circuit - TTL



*Inclusive of jigging & equipment capacitance

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