

CFPS-67, -68, -69 SMD CLOCK OSCILLATORS

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Description

- Low supply current crystal oscillators
- Ceramic package with a seam sealed metal lid, hermetically sealed
- Please see our CFPS-9 and CFPS-37 packages for standard 5 x 3.2 oscillators
- Stock parts listed at the beginning of this chapter

Frequency Range

- 1.8MHz to 50MHz

Output Compatibility & Load

- CMOS
- Drive Capability 15pF max

Supply Voltages

- 2.5V CFPS-67
- 2.8V CFPS-68
- 3.3V CFPS-69

Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (inclusive of supply voltage and output load variations over the operating temperature range)
- Note: ±25ppm is not available over -40 to 85°C

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Storage Temperature Range

- 55 to 125°C

Standby Operation

- Logic '1' (>70% V_S) to pad 1 enables oscillator output
- Logic '0' (<30% V_S) to pad 1 disables oscillator output; when the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output
- Standby Current: 1µA max

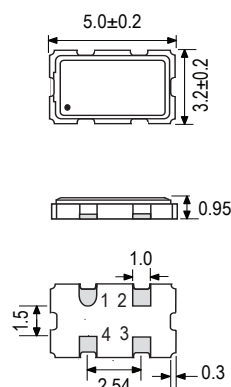
Environmental

- Shock: MIL-STD-202F, Method 213B: 1000G, 0.5ms, 1/2 sine wave
- Vibration: MIL-STD-202F, Method 204D, Test Condition D: 20G (10Hz-2000Hz), 4hrs in 3 mutually perpendicular planes (total 12hrs)

Packaging

- Loose in bulk pack, 100pcs per pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

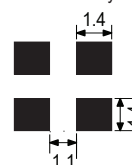
Outline (mm)



Pad Connections

- Standby Operation
- GND
- Output
- +V_S

Solder Pad Layout



Ordering Information (*minimum required)

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage

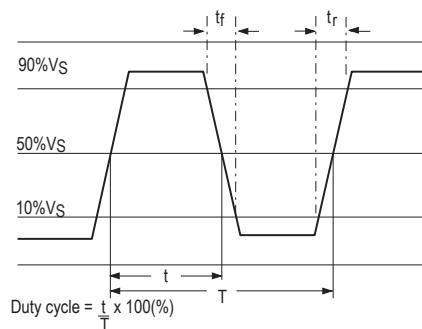
Example

- 20.0MHz CFPS-69
CMOS ±50ppm -10 to 70C 3.3V

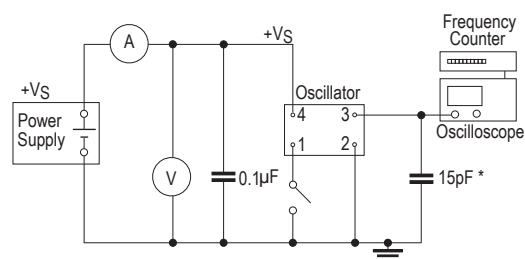
Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (10-90%)	Fall Time (tf) (90-10%)	Duty Cycle	Model Number
1.8 to <32.0MHz	±25ppm ±50ppm ±100ppm	2.5V±5%	3.5mA	12ns	12ns	45/55%	CFPS-67
32.0 to 50.0MHz			4.5mA				
1.8 to <32.0MHz		2.8V±5%	4.0mA				CFPS-68
32.0 to 50.0MHz			5.0mA				
1.8 to <32.0MHz		3.3V±5%	4.5mA				CFPS-69
32.0 to 50.0MHz			6.0mA				
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 offices							
Note: For other frequency/specification combinations, please contact our sales offices							

Output Waveform



Test Circuit



* Inclusive of jigging and equipment capacitance