

ISSUE 8; September 2021

Description

- Standard 5 x 3.2mm crystal oscillator
Ceramic package with a seam sealed metal lid, hermetically sealed
Please see our CFPS-12 for a 5.0V version of this package
Please see our CFPS-37 for a 2.5V version of this package
Please see our CFPS-69 for a low current version of this package
Fast Make capability: CFPS-9 programmable oscillator as the nearest equivalent fast make model
- Note: please be aware that devices supplied against this model may show slight cosmetic differences depending upon the frequency and specification, however all electrical details remain as per the model specification.



Frequency Parameters

- Frequency: 500.0kHz to 160.0MHz
- Frequency Stability: $\pm 25.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Supply Voltage: 3.3V $\pm 0.3\text{V}$

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Start up time: 10ms max
0.8ms typ to 90% of final amplitude (under ideal conditions @ 25°C)

Output Control

- Enable/Disable 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 μA max, 0.9 μA typ @25°C

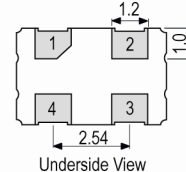
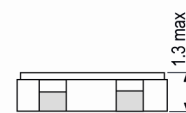
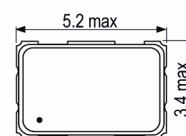
Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- 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)

Manufacturing Details

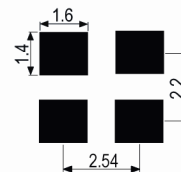
- RoHS Terminations: NiAu
- RoHS Reflow: 260°C 10s max

Outline (mm)

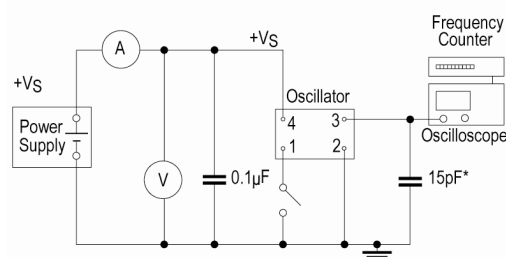


- Pad Connections
1. Enable/Disable
 2. GND
 3. Output
 4. +Vs

Solder Pad Layout



Test Circuit



* Inclusive of jigging and equipment capacitance

Sales Office Contact Details:

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Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- Example:
 - 10.0MHz CFPS-9
 - CMOS ± 50 ppm -10 to 70C 3.3V

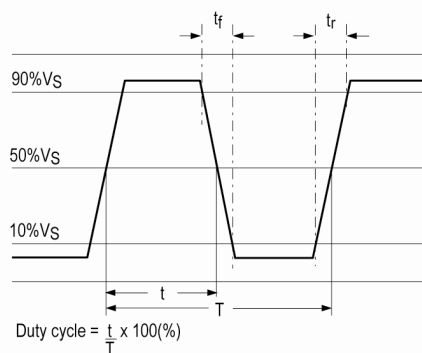
Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Wave Form



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Electrical Specification - maximum limiting values 3.3V \pm 0.3V

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
500.0kHz	9.999999MHz	-10 to 70	\pm 25.0	20	10	40/60%
		-40 to 85	\pm 25.0	20	10	40/60%
10.0MHz	19.999999MHz	-10 to 70	\pm 25.0	20	10	40/60%
		-40 to 85	\pm 25.0	20	10	40/60%
20.0MHz	31.999999MHz	-10 to 70	\pm 25.0	20	10	40/60%
		-40 to 85	\pm 25.0	20	10	40/60%
32.0MHz	49.999999MHz	-10 to 70	\pm 25.0	20	10	40/60%
		-40 to 85	\pm 25.0	20	10	40/60%
50.0MHz	79.999999MHz	-10 to 70	\pm 25.0	30	8	40/60%
		-40 to 85	\pm 25.0	30	8	40/60%
80.0MHz	99.999999MHz	-10 to 70	\pm 25.0	40	5	40/60%
		-40 to 85	\pm 25.0	40	5	40/60%
100.0MHz	160.0MHz	-10 to 70	\pm 25.0	50	4	40/60%
		-40 to 85	\pm 25.0	50	4	40/60%

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