

ISSUE 7; May 2024

Description

- Standard 7.0 x 5.0mm, 1.8V surface mount oscillator in a ceramic package, with a hermetically sealed metal lid



Frequency Parameters

- Frequency: 500.0kHz to 156.25MHz
- Frequency Stability: $\pm 20.00\text{ppm}$ to $\pm 100.00\text{ppm}$

Electrical Parameters

- Supply Voltage: 1.8V $\pm 5\%$

Operating Temperature Ranges

- 20 to 70°C
- 40 to 125°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max

Output Control

- Logic '1' (>70% VS) to pad 1 enables oscillator output
Logic '0' (<30% VS) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state
No connection to pad 1 enables oscillator output
- Standby Current: 10µA max

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Drop Test: in accordance with JIS-C0044: The specimen is measured for its frequency before the test. It is then dropped from a height of 75 cm or more as a free fall object onto a hard wooden plate of 30 mm or more in thickness.
- Vibration: MIL-STD-883F :2007.3 : Freq.range: 20~2000Hz; Peak to peak amplitude: 1.52mm; Peak acceleration: 20g; Sweep time: 3 directions (X, Y, Z), each 20 minutes / axis; Perpendicular test time: 4 hours

Manufacturing Details

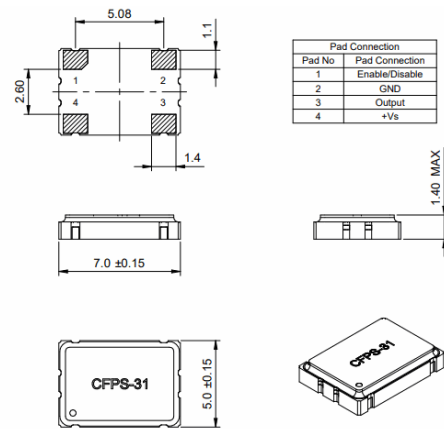
- RoHS Terminations: Au / 0.3 µm min.
- RoHS Reflow: 255°C 30s max

Ordering Information

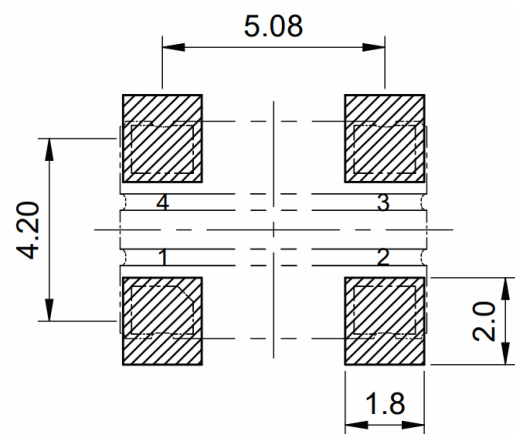
- Frequency*
Model
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
(*minimum required)
- Example
10.0MHz CFPS-31
CMOS $\pm 50\text{ppm}$ -10 to 70C 1.8V



Outline (mm)



Recommended Solder Pad Layout



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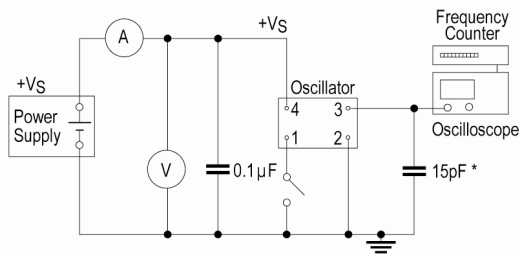
Compliance

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

Packaging Details

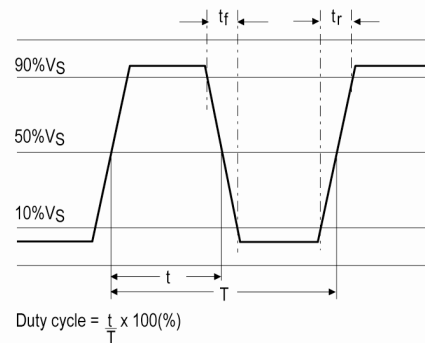
- Pack Style: Reel Tape & reel in accordance with EIA-481
Standard Pack Quantity: 1,000
- Pack Style: Bulk Loose in bulk pack
Standard Pack Quantity: 200

Test Circuit



* Inclusive of jigging and equipment capacitance

Wave Form



Electrical Specification - maximum limiting values 1.8V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
500.0kHz	9.999999MHz	-20 to 70	±20.0	5	5	40/60
		-40 to 125	±20.0	5	5	40/60
10.0MHz	31.999999MHz	-20 to 70	±20.0	6	5	40/60
		-40 to 125	±20.0	6	5	40/60
32.0MHz	49.999999MHz	-20 to 70	±20.0	15	5	40/60
		-40 to 125	±20.0	15	5	40/60
50.0MHz	79.999999MHz	-20 to 70	±20.0	15	4	40/60
		-40 to 125	±20.0	15	4	40/60
80.0MHz	99.999999MHz	-20 to 70	±20.0	20	3	40/60
		-40 to 125	±20.0	20	3	40/60
100.0MHz	156.25MHz	-20 to 70	±20.0	25	3	40/60
		-40 to 125	±20.0	25	3	40/60

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