

ISSUE 8; May 2025

### 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;  
Pendicular test time: 4 hours

### Manufacturing Details

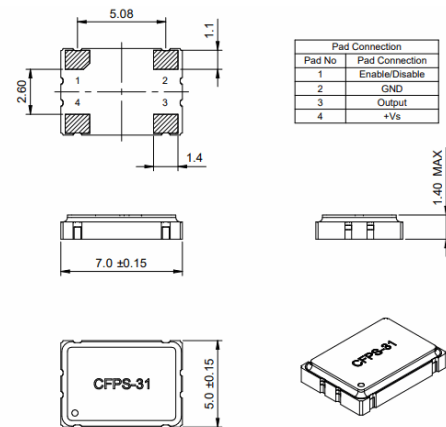
- RoHS Terminations Au / 0.3 µm min.
- RoHS Reflow 255°C 30s max

### Ordering Information

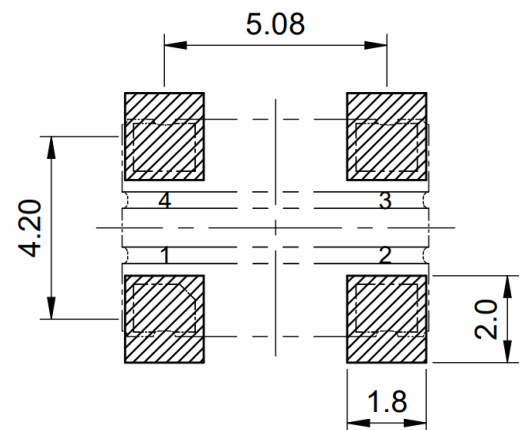
- Frequency\*  
Model  
Output  
Frequency Stability\*  
Operating Temperature Range\*  
Supply Voltage  
(\*minimum required)
- Example  
10.0MHz CFPS-31  
CMOS  $\pm 50\text{ppm}$  -10 to 70C 1.8V



### Outline (mm)



### Recommended Solder Pad Layout



### Sales Office Contact Details:

UK: +44 (0)1460 270200

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

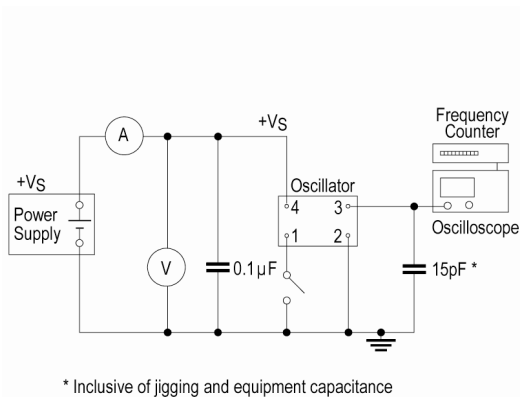
### Compliance

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

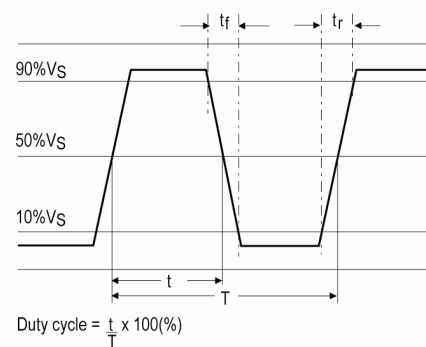
### Packaging Details

- Tape & reel in accordance with EIA-481  
Quantities below the standard reel size to be supplied on cut tape  
Standard Pack Quantity: 1,000

### Test Circuit



### Wave Form



### Electrical Specification - maximum limiting values 1.8V $\pm 5\%$

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	$\pm 20.0$	5	5	40/60
		-40 to 125	$\pm 20.0$	5	5	40/60
10.0MHz	31.999999MHz	-20 to 70	$\pm 20.0$	6	5	40/60
		-40 to 125	$\pm 20.0$	6	5	40/60
32.0MHz	49.999999MHz	-20 to 70	$\pm 20.0$	15	5	40/60
		-40 to 125	$\pm 20.0$	15	5	40/60
50.0MHz	79.999999MHz	-20 to 70	$\pm 20.0$	15	4	40/60
		-40 to 125	$\pm 20.0$	15	4	40/60
80.0MHz	99.999999MHz	-20 to 70	$\pm 20.0$	20	3	40/60
		-40 to 125	$\pm 20.0$	20	3	40/60
100.0MHz	156.25MHz	-20 to 70	$\pm 20.0$	25	3	40/60
		-40 to 125	$\pm 20.0$	25	3	40/60

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UK: +44 (0)1460 270200

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)