



CFPS-10x

Suitable for real time clock applications
32.768kHz output crystal oscillators
Ceramic package with a seam sealed metal lid, hermetically sealed

Model Name	Description
CFPS-107	A 1.8V version
CFPS-108	A 2.5V version
CFPS-109	A 3.3V version

ISSUE 3; December 2017



Description

- Suitable for real time clock applications
32.768kHz output crystal oscillators
Ceramic package with a seam sealed metal lid, hermetically sealed

Frequency Parameters

- Frequency 32.768kHz
- Frequency Stability $\pm 20.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year

Electrical Parameters

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

Operating Temperature Ranges

- 0 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Logic '1' to pad 1 enables oscillator output
Logic '0' 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

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-883F, Method 2002.4: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes.
- Vibration: MIL-STD-883F, Method 2007.3: 20G (20Hz-2000Hz), 1.52mm amplitude

Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
- Example
32.768kHz CFPS-107
CMOS $\pm 50\text{ppm}$ 0 to 70C 1.8V

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

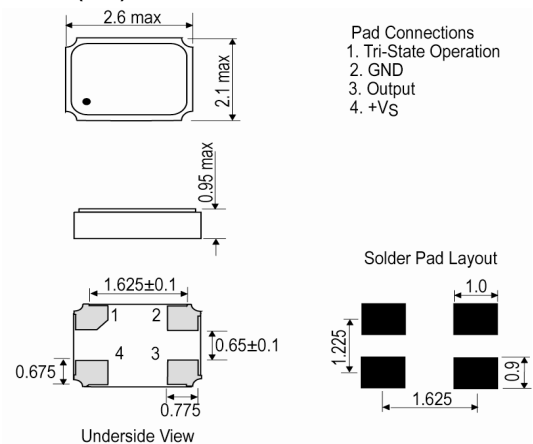
Packaging Details

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

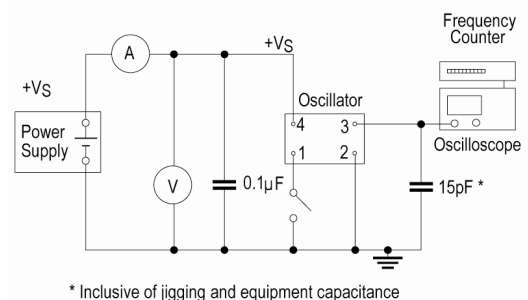
Wave Form



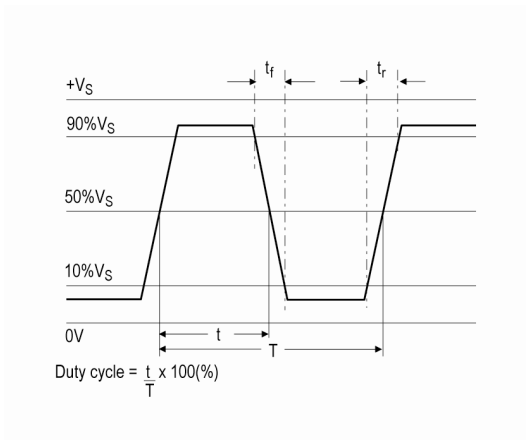
Outline (mm)



Test Circuit



ISSUE 3; December 2017



Electrical Specification - maximum limiting values 1.80V \pm 5%

Frequency Min	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	$^{\circ}\text{C}$	ppm	mA	ns	%
32.768kHz	-40 to 85	± 25.00	1.5	50	40/60%
	0 to 70	± 20.00	1.5	50	40/60%

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Ceramic package with a seam sealed metal lid, hermetically sealed

Frequency Parameters

- Frequency 32.768kHz
- Frequency Stability $\pm 20.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage 2.5V $\pm 5\%$

Operating Temperature Ranges

- 0 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Logic '1' to pad 1 enables oscillator output
Logic '0' 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

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-883F, Method 2002.4: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes.
- Vibration: MIL-STD-883F, Method 2007.3: 20G (20Hz-2000Hz), 1.52mm amplitude

Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
- Example
32.768kHz CFPS-108
CMOS $\pm 50\text{ppm}$ 0 to 70C 2.5V

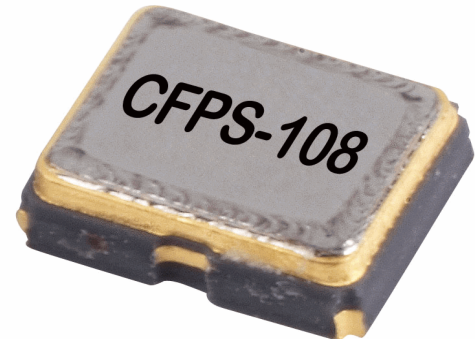
Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

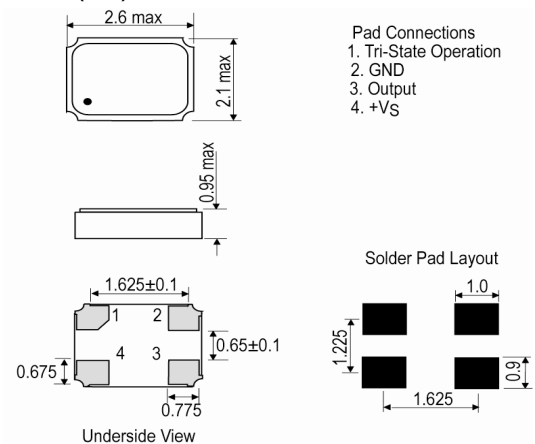
Packaging Details

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

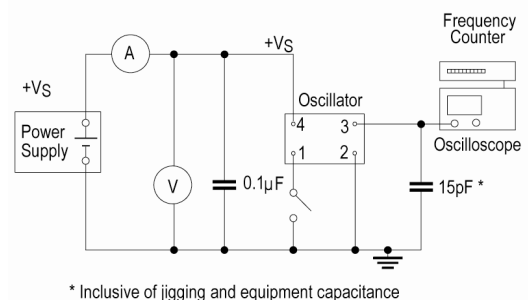
Wave Form



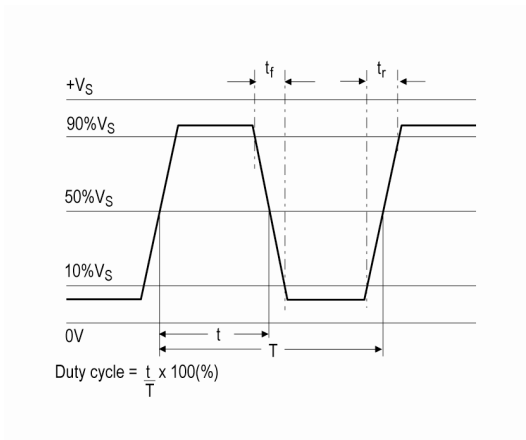
Outline (mm)



Test Circuit



ISSUE 3; December 2017



Electrical Specification - maximum limiting values 2.50V ±5%

Frequency Min	Temperature Range °C	Stability (Min) ppm	Current Draw mA	Rise and Fall Time ns	Duty Cycle %
32.768kHz	-40 to 85	±25.00	2.5	50	40/60%
	0 to 70	±20.00	2.5	50	40/60%

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Frequency Parameters

- Frequency 32.768kHz
- Frequency Stability $\pm 20.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$

Operating Temperature Ranges

- 0 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF max
- Logic '1' to pad 1 enables oscillator output
Logic '0' 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

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-883F, Method 2002.4: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes.
- Vibration: MIL-STD-883F, Method 2007.3: 20G (20Hz-2000Hz), 1.52mm amplitude

Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
- Example
32.768kHz CFPS-109
CMOS $\pm 50\text{ppm}$ 0 to 70C 3.3V

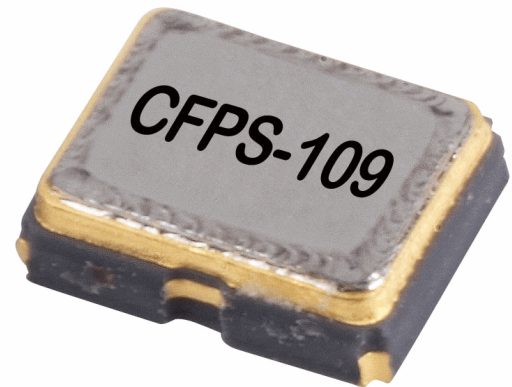
Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

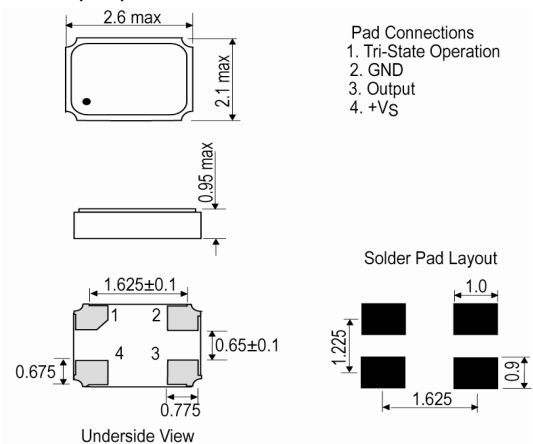
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Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Wave Form



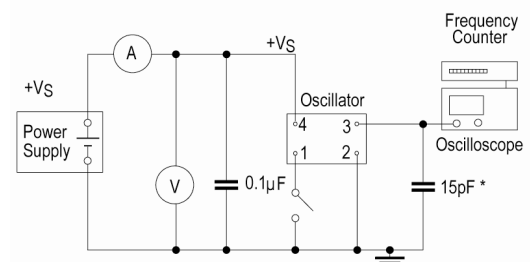
Outline (mm)



- Pad Connections
1. Tri-State Operation
 2. GND
 3. Output
 4. +Vs

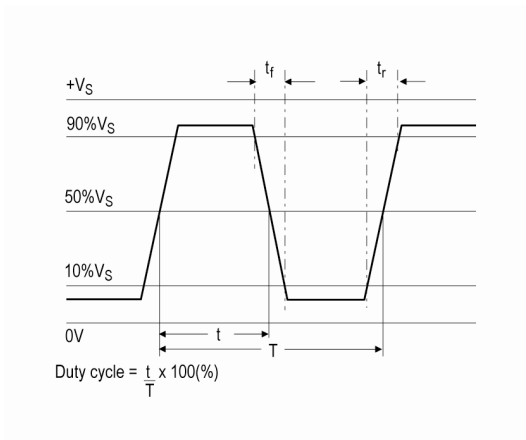
Solder Pad Layout

Test Circuit



* Inclusive of jigging and equipment capacitance

ISSUE 3; December 2017



Electrical Specification - maximum limiting values 3.30V ±5%

Frequency Min	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
32.768kHz	-40 to 85	±25.00	3.5	50	40/60%
	0 to 70	±20.00	3.5	50	40/60%

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