



CFPS-39x

Surface mount 3.2 x 2.5mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid.

Fast Make capability: CFPP-39 programmable oscillator is the nearest

Model Name	Description
CFPS-39	A 3.3V Version
CFPS-40	A 2.5V Version
CFPS-41	A 1.8V Version

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Description

- Surface mount 3.2 x 2.5mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid. Fast Make capability: CFPP-39 programmable oscillator is the nearest equivalent fast make model.

Frequency Parameters

- Frequency: 2.0MHz to 125.0MHz
- 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 $\pm 10\%$

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.
0.7ms typ to 90% of final amplitude (under ideal conditions @ 25°C)

Output Control

- Standby 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: 10µA max

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)

Ordering Information

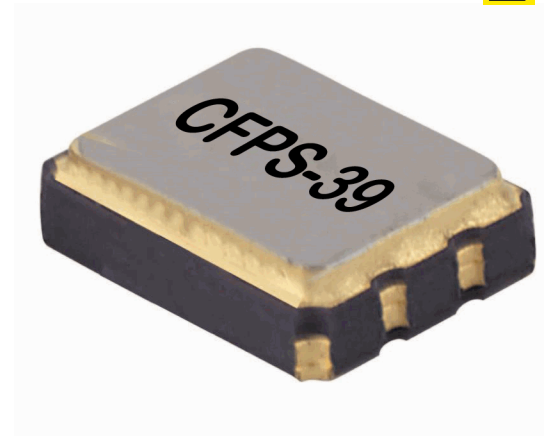
- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
(*minimum required)
- Example
10.0MHz CFPS-39
CMOS $\pm 50\text{ppm}$ -10 to 70C 3.3V

Compliance

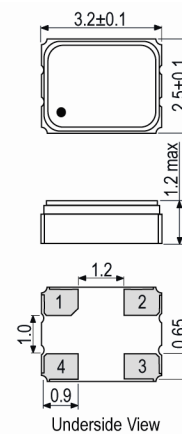
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100
- Pack Style: RL3K Tape & reel in accordance with EIA-481-D
Pack Size: 3,000

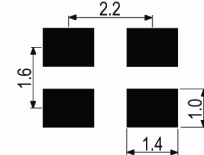


Outline (mm)

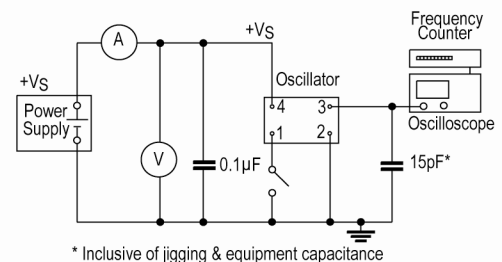


- Pad Connections
- Standby Operation
 - GND
 - Output
 - +Vs

Solder Pad Layout

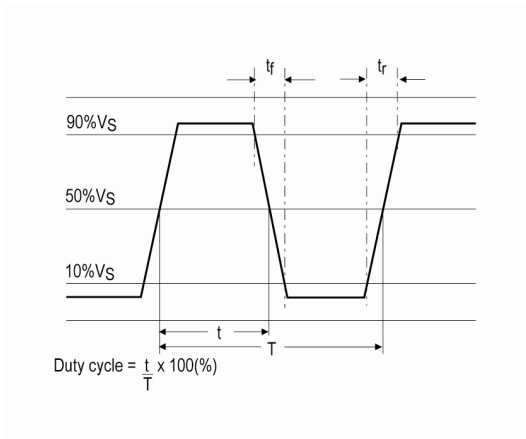


Test Circuit



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Wave Form



Electrical Specification - maximum limiting values 3.3V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
2.0MHz	9.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	7 7	5 5	45/55% 45/55%
10.0MHz	19.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	7 7	5 5	45/55% 45/55%
20.0MHz	31.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	12 12	5 5	45/55% 45/55%
32.0MHz	50.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	20 20	5 5	45/55% 45/55%
50.000001MHz	125.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	30 30	5 5	40/60% 40/60%

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Description

- Surface mount 3.2 x 2.5mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid. Fast Make capability: CFPP-40 programmable oscillator is the nearest equivalent fast make model.

Frequency Parameters

- Frequency: 2.0MHz to 125.0MHz
- 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: 2.5V $\pm 5\%$

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

Output Control

- Standby 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: 10µA max

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)

Ordering Information

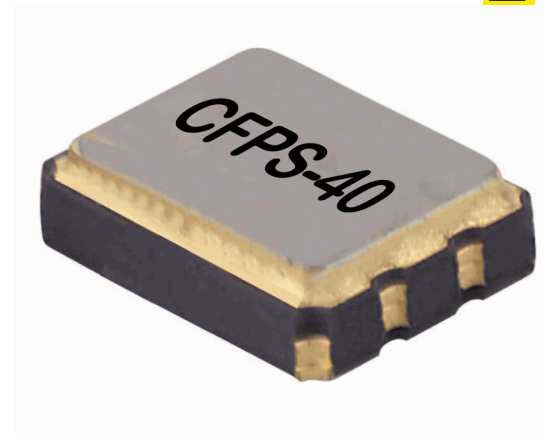
- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage (*minimum required)
- Example
 - 10.0MHz CFPS-40
 - CMOS $\pm 50\text{ppm}$ -10 to 70C 2.5V

Compliance

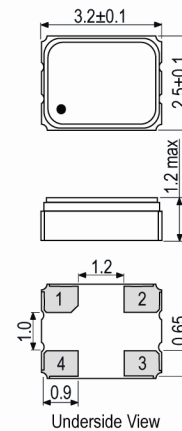
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Cutt In tape, cut from reel
- Pack Size: 100
- Pack Style: RL3K Tape & reel in accordance with EIA-481-D
- Pack Size: 3,000



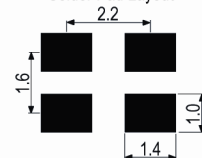
Outline (mm)



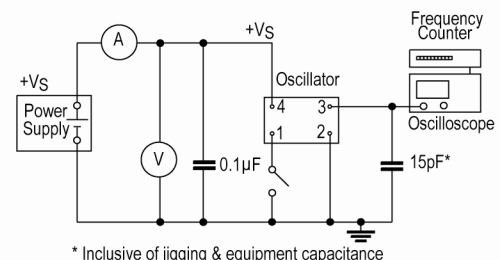
Pad Connections

- Standby Operation
- GND
- Output
- +Vs

Solder Pad Layout



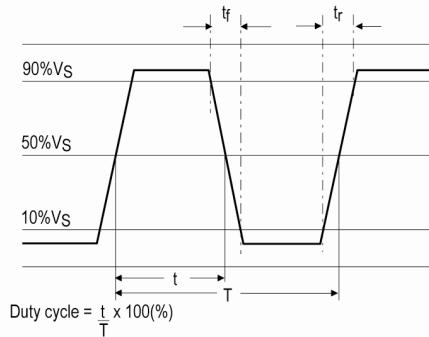
Test Circuit



* Inclusive of jigging & equipment capacitance

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Wave Form



Electrical Specification - maximum limiting values 2.5V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
2.0MHz	9.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	6 6	5 5	40/60% 40/60%
10.0MHz	19.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	8 8	5 5	40/60% 40/60%
20.0MHz	31.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	8 8	5 5	40/60% 40/60%
32.0MHz	50.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	20 20	5 5	40/60% 40/60%
50.000001MHz	125.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	30 30	5 5	40/60% 40/60%

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ISSUE 6; September 2019

Description

- Surface mount 3.2 x 2.5mm crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid. Fast Make capability: CFPP-41 programmable oscillator is the nearest equivalent fast make model.

Frequency Parameters

- Frequency: 2.0MHz to 125.0MHz
- 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: 1.8V $\pm 5\%$

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

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

Output Control

- Standby 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 μ A max
- Start-Up Time: 10ms max

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)

Ordering Information

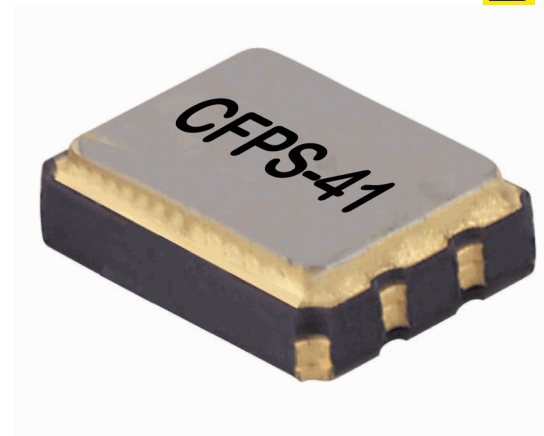
- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage (*minimum required)
- Example
 - 10.0MHz CFPS-41
 - CMOS $\pm 50\text{ppm}$ -10 to 70C 1.8V

Compliance

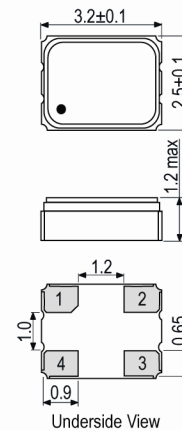
- RoHS Status (2011/65/EU): Compliant
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- MSL Rating (JDEC-STD-033): Not Applicable

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- Pack Style: Cutt In tape, cut from a reel
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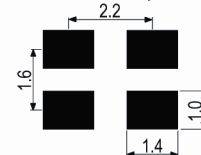


Outline (mm)

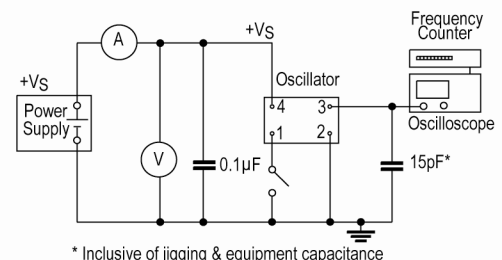


- Pad Connections
- Standby Operation
 - GND
 - Output
 - +Vs

Solder Pad Layout



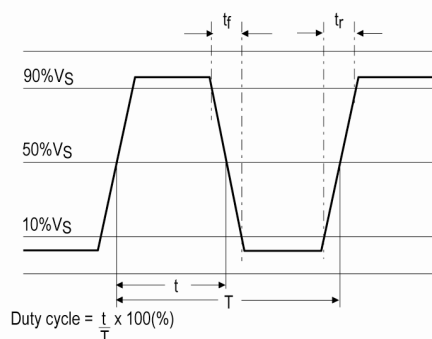
Test Circuit



* Inclusive of jigging & equipment capacitance

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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	%
2.0MHz	9.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	5 5	7 7	40/60% 40/60%
10.0MHz	19.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	6 6	7 7	40/60% 40/60%
20.0MHz	31.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	6 6	6 6	40/60% 40/60%
32.0MHz	50.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	15 15	6 6	40/60% 40/60%
50.000001MHz	125.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	25 25	6 6	40/60% 40/60%

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