



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

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)

Manufacturing Details

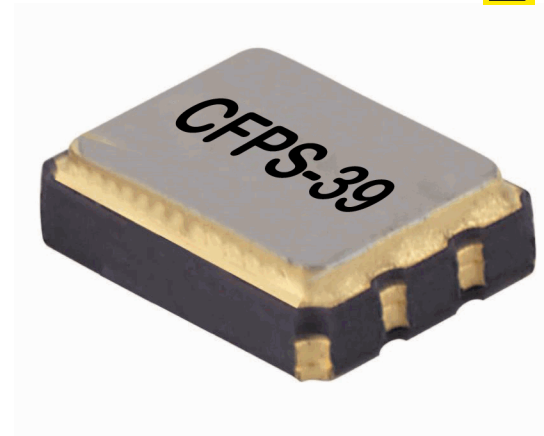
- Maximum Process Temperature: 260°C (10secs max)

Ordering Information

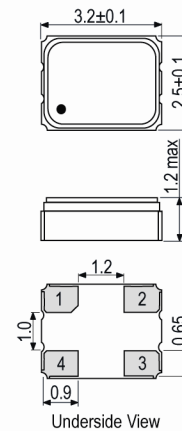
- Frequency*
 - Model*
 - Output
 - Frequency Stability*
 - Operating Temperature Range*
 - Supply Voltage
- Example
 - 10.0MHz CFPS-39
 - CMOS $\pm 50\text{ppm}$ -10 to 70C 3.3V

Compliance

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



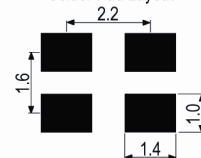
Outline (mm)



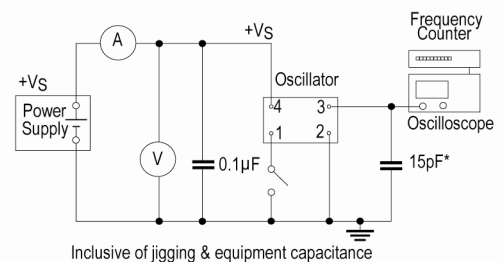
Pad Connections

- Enable/Disable
- GND
- Output
- +Vs

Solder Pad Layout



Test Circuit

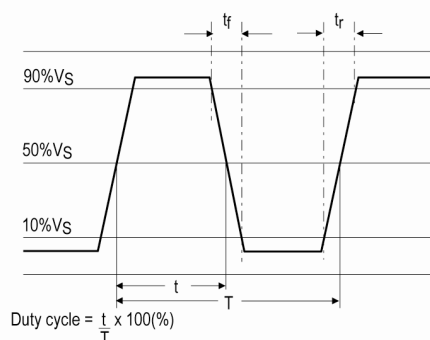


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Packaging Details

- 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
- Pack Style: Bulk Loose in bulk pack
Pack Size: 100

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	±25.0	7	5	45/55%
		-40 to 85	±25.0	7	5	45/55%
10.0MHz	19.999999MHz	-10 to 70	±25.0	7	5	45/55%
		-40 to 85	±25.0	7	5	45/55%
20.0MHz	31.999999MHz	-10 to 70	±25.0	12	5	45/55%
		-40 to 85	±25.0	12	5	45/55%
32.0MHz	50.0MHz	-10 to 70	±25.0	20	5	45/55%
		-40 to 85	±25.0	20	5	45/55%
50.000001MHz	125.0MHz	-10 to 70	±25.0	30	5	40/60%
		-40 to 85	±25.0	30	5	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

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
 - 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)

Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)

Ordering Information

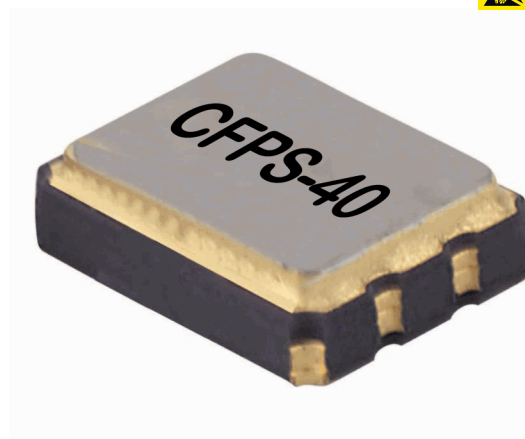
- Frequency*
 - Model*
 - Output
 - Frequency Stability*
 - Operating Temperature Range*
 - Supply Voltage
- Example
 - 10.0MHz CFPS-40
 - CMOS $\pm 50\text{ppm}$ -10 to 70C 2.5V

Compliance

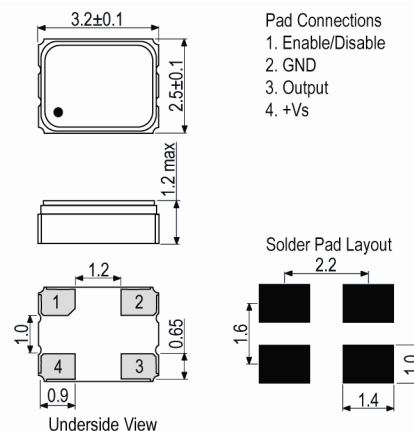
- RoHS Status (2011/65/EU): Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

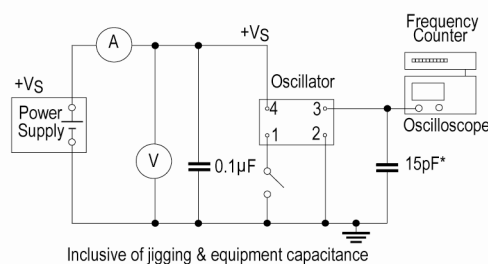
- Pack Style: Reel: Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Cutt: In tape, cut from reel
Pack Size: 100



Outline (mm)

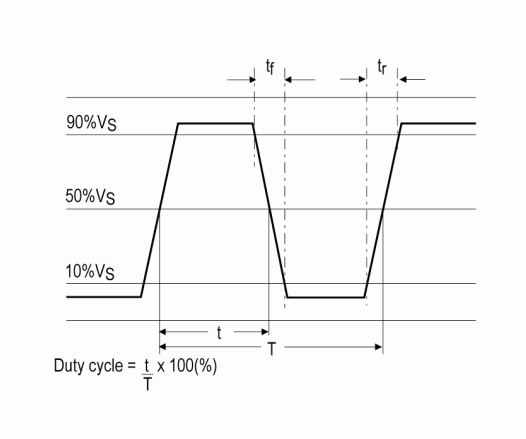


Test Circuit



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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 5; October 2018

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: 10µA 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)

Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)

Ordering Information

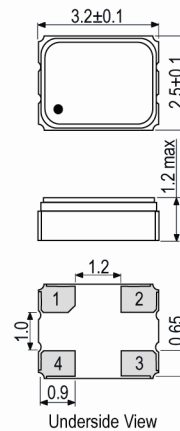
- Frequency*
 - Model*
 - Output
 - Frequency Stability*
 - Operating Temperature Range*
 - Supply Voltage
- Example
 - 10.0MHz CFPS-41
 - CMOS $\pm 50\text{ppm}$ -10 to 70C 1.8V

Compliance

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



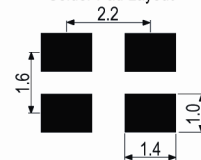
Outline (mm)



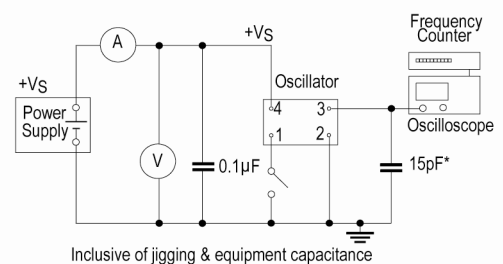
Pad Connections

- Enable/Disable
- GND
- Output
- +Vs

Solder Pad Layout



Test Circuit

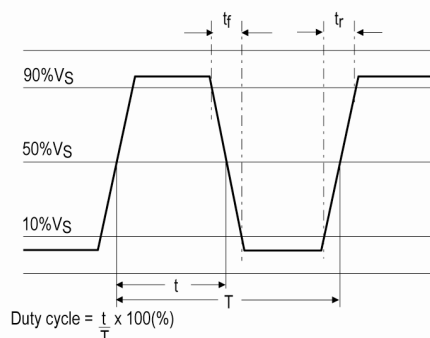


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Packaging Details

- 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



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

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