



CFPS-11x

Low phase noise crystal oscillator

Ceramic package with a seam sealed metal lid, hermetically sealed

For standard 2.5 x 2 package oscillators please see our CFPS-53, CFPS-54, CFPS-55 and CFPS-56 series

Model Name	Description
CFPS-112	A 1.8V version
CFPS-113	A 2.5V version
CFPS-114	A 3.0V version
CFPS-115	A 3.3V version

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Description

- Low phase noise crystal oscillator
Ceramic package with a seam sealed metal lid, hermetically sealed
For standard 2.5 x 2 package oscillators please see our CFPS-53, CFPS-54, CFPS-55 and CFPS-56 series



Frequency Parameters

- Frequency: 26.0MHz to 44.0MHz
- Frequency Stability: $\pm 30.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage: $1.8\text{V} \pm 5\%$

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Logic '1' (>80%VS) to pad 1 enables oscillator output
Logic '0' (<20% 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

Noise Parameters

- Phase Noise typical figures (dBc/Hz):

Frequency	10Hz	100Hz	1kHz	10kHz	100kHz
27MHz	-75	-111	-146	-155	-157
40MHz	-80	-116	-145	-157	-159

Environmental Parameters

- Drop: 100cm drop (3 times) onto hard wooden board
- Vibration: 10Hz-36Hz, 1.5mm amplitude, 36Hz-55Hz, 4G sweep time 1min/oct, 2hrs in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 100°C

Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
- Example
30.0MHz CFPS-112
CMOS $\pm 50\text{ppm}$ -20 to 70C 1.8V

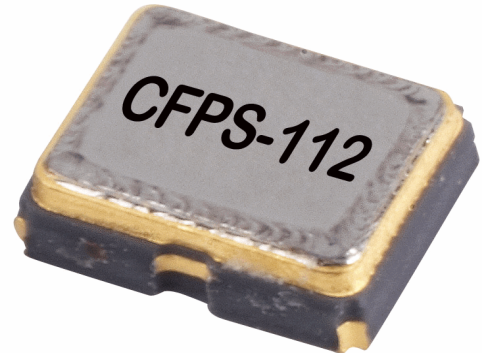
Compliance

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

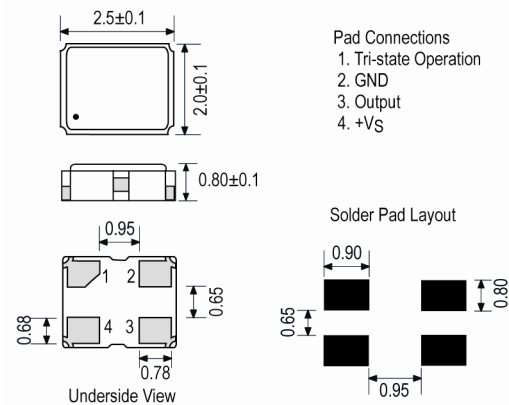
Packaging Details

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

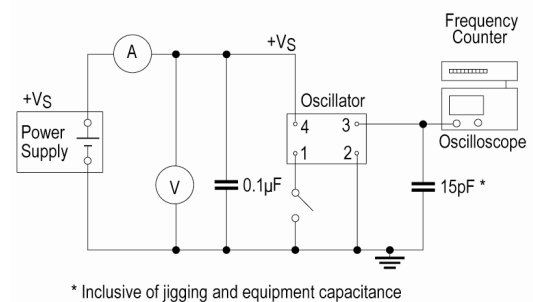
Wave Form



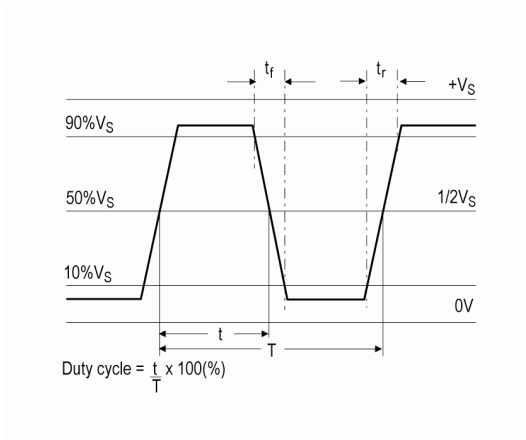
Outline (mm)



Test Circuit



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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	%
26.0MHz	44.0MHz	-20 to 70	±30.0	3	10	45/55%
		-40 to 85	±30.0	3	10	45/55%

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Description

- Low phase noise crystal oscillator
Ceramic package with a seam sealed metal lid, hermetically sealed



Frequency Parameters

- Frequency: 26.0MHz to 44.0MHz
- Frequency Stability: $\pm 30.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year

Electrical Parameters

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

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF
- Logic '1' (>80%VS) to pad 1 enables oscillator output
Logic '0' (<20% 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

Noise Parameters

- Phase Noise typical figures (dBc/Hz):

Frequency	10Hz	100Hz	1kHz	10kHz	100kHz
40MHz	-80	-116	-145	-157	-159
27MHz	-75	-111	-146	-155	-157

Environmental Parameters

- Drop: 100cm drop (3 times) onto hard wooden board
- Vibration: 10Hz-36Hz, 1.5mm amplitude, 36Hz-55Hz, 4G sweep time 1min/oct, 2hrs in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 100°C

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- Example
30.0MHz CFPS-113
CMOS $\pm 50\text{ppm}$ -20 to 70C 2.5V

Compliance

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

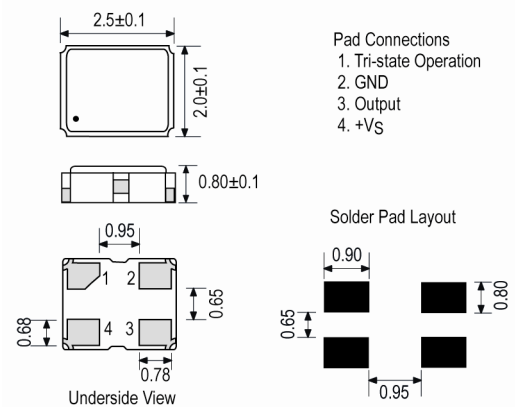
Packaging Details

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

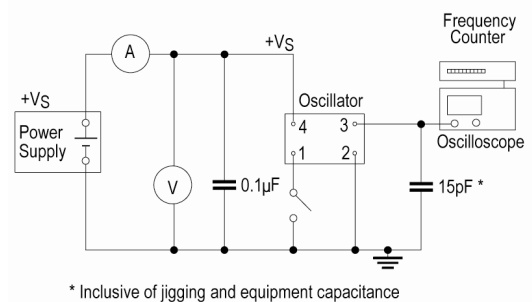
Wave Form



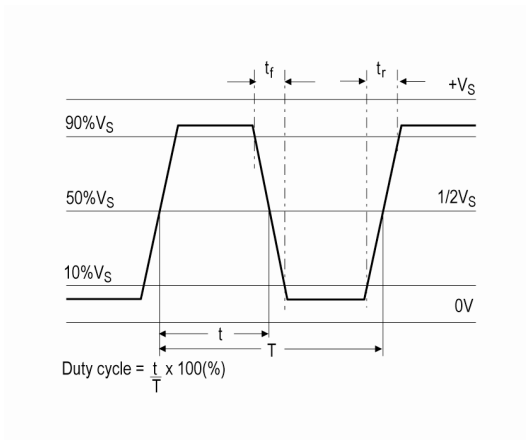
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 2.5V \pm 5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		$^{\circ}\text{C}$	ppm	mA	ns	%
26.0MHz	44.0MHz	-20 to 70	± 30.0	5.5	10	40/60%
		-40 to 85	± 30.0	5.5	10	40/60%

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Frequency Parameters

- Frequency: 26.0MHz to 44.0MHz
- Frequency Stability: $\pm 30.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage: 3.0V $\pm 5\%$

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Logic '1' (>80%VS) to pad 1 enables oscillator output
Logic '0' (<20% 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

Noise Parameters

- Phase Noise typical figures (dBc/Hz):

Frequency	10Hz	100Hz	1kHz	10kHz	100kHz
27MHz	-75	-111	-146	-155	-157
40MHz	-80	-116	-145	-157	-159

Environmental Parameters

- Drop: 100cm drop (3 times) onto hard wooden board
- Vibration: 10Hz-36Hz, 1.5mm amplitude, 36Hz-55Hz, 4G sweep time 1min/oct, 2hrs in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 100°C

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- Example
30.0MHz CFPS-114
CMOS $\pm 50\text{ppm}$ -20 to 70C 3.0V

Compliance

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

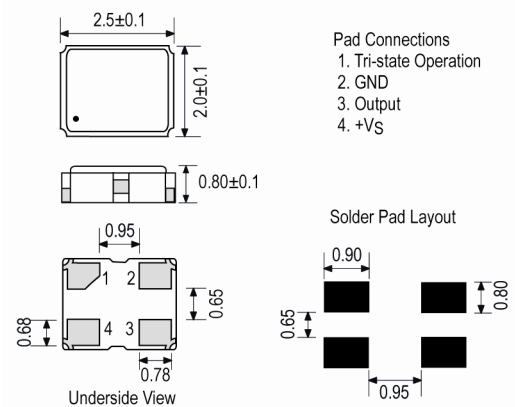
Packaging Details

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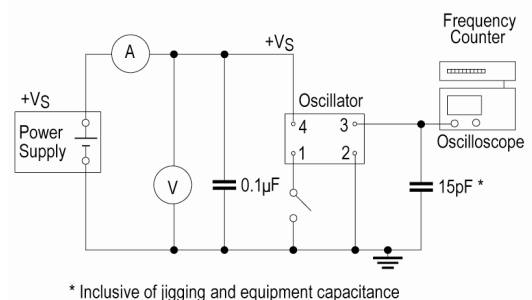
Wave Form



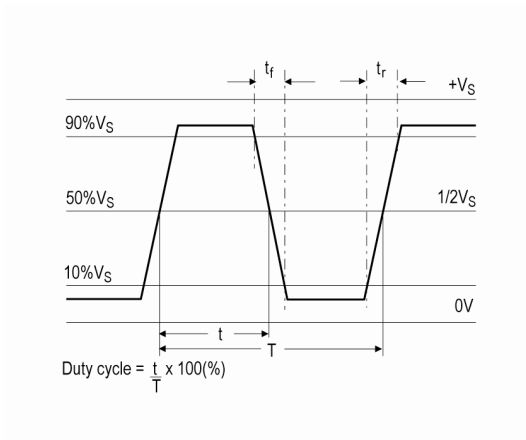
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 3.0V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
26.0MHz	44.0MHz	-20 to 70	±30.0	6.5	10	45/55%
		-40 to 85	±30.0	6.5	10	45/55%

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Frequency Parameters

- Frequency: 26.0MHz to 44.0MHz
- Frequency Stability: $\pm 30.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing: $\pm 5\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage: $3.3\text{V} \pm 5\%$

Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF
- Logic '1' (>80%VS) to pad 1 enables oscillator output
Logic '0' (<20% 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

Noise Parameters

- Phase Noise typical figures (dBc/Hz):

Frequency	10Hz	100Hz	1kHz	10kHz	100kHz
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Environmental Parameters

- Drop: 100cm drop (3 times) onto hard wooden board
- Vibration: 10Hz-36Hz, 1.5mm amplitude, 36Hz-55Hz, 4G sweep time 1min/oct, 2hrs in 3 mutually perpendicular planes
- Storage Temperature Range: -55 to 100°C

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- Example
30.0MHz CFPS-115
CMOS $\pm 50\text{ppm}$ -20 to 70C 3.3V

Compliance

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

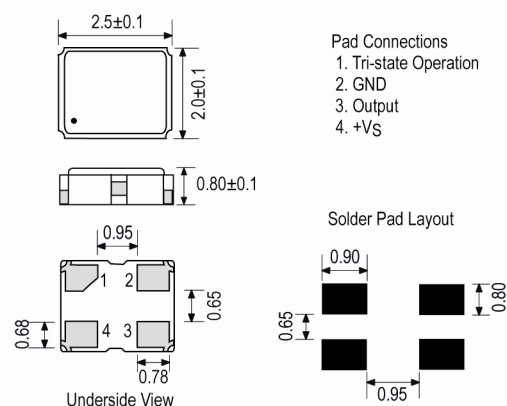
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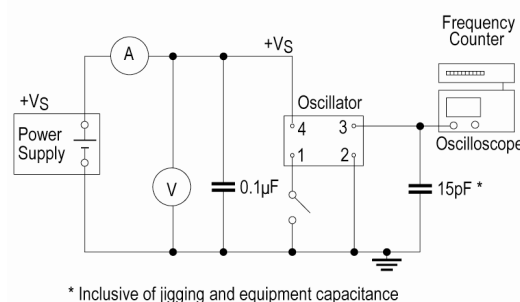
Wave Form



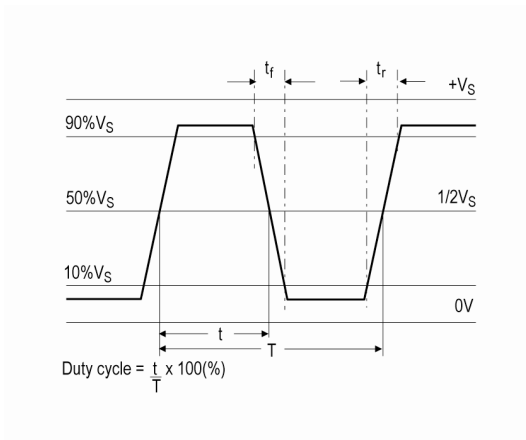
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 3.3V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
26.0MHz	44.0MHz	-20 to 70	±30.0	7	10	45/55%
		-40 to 85	±30.0	7	10	45/55%

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