



## CFPS-11x

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**

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

ISSUE 4; April 2021



### 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 1.8V  $\pm 5\%$

### 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

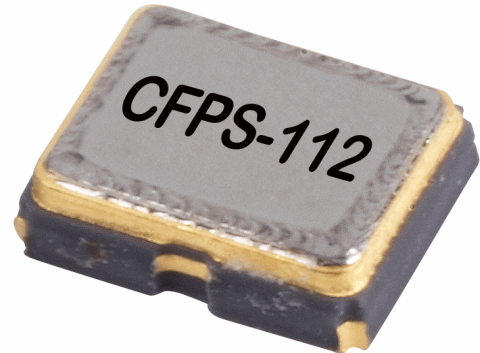
### Compliance

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

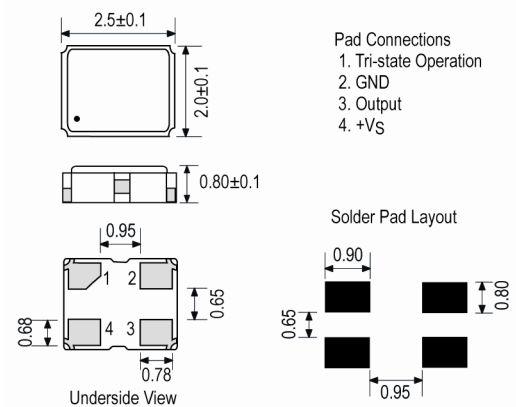
### Packaging Details

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

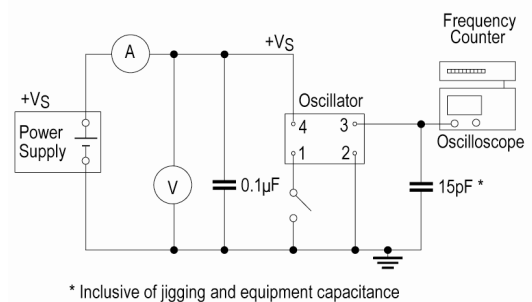
### Wave Form



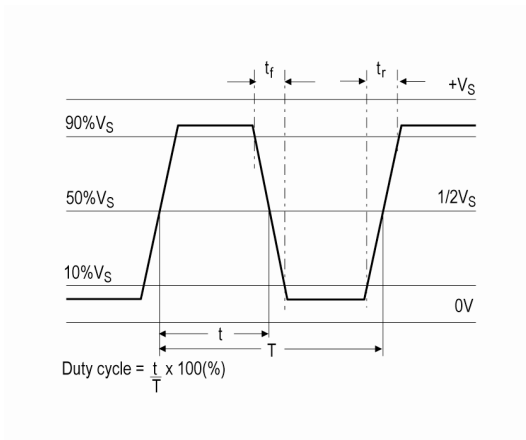
### Outline (mm)



### 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:  $2.5\text{V} \pm 5\%$

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

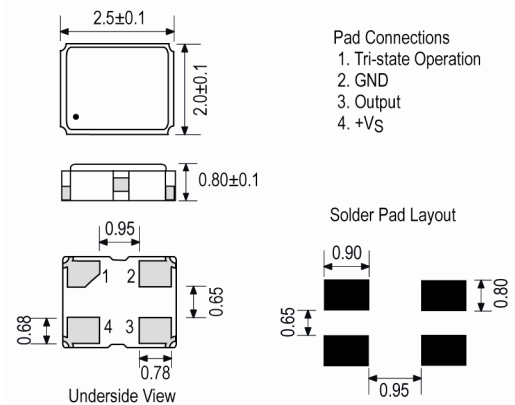
### Packaging Details

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

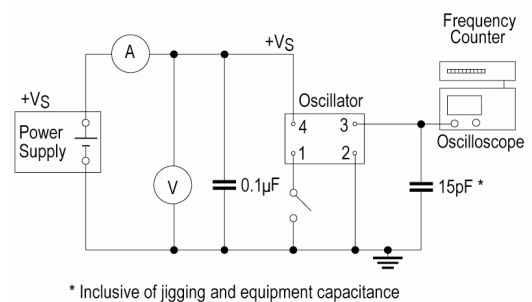
### Wave Form



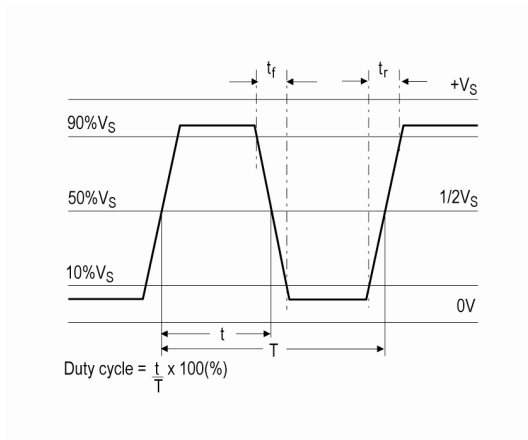
### Outline (mm)



### Test Circuit



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

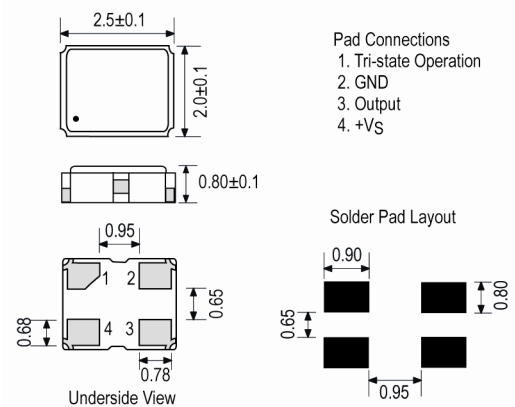
### Packaging Details

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

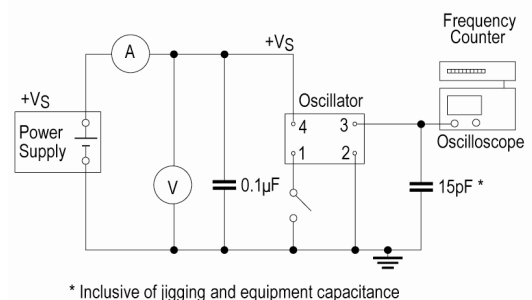
### Wave Form



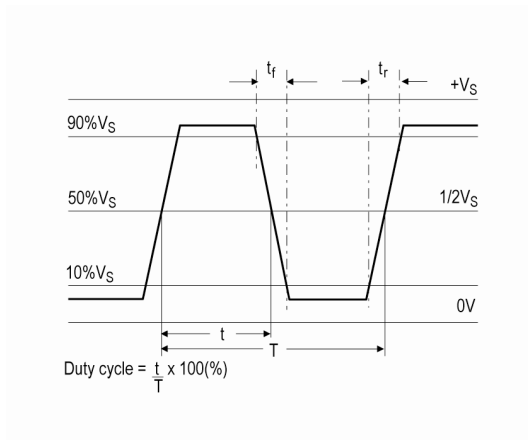
### Outline (mm)



### 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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### 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: 3.3V  $\pm 5\%$

### Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF

### Output Control

- Logic '1' ( $>80\%V_S$ ) to pad 1 enables oscillator output  
Logic '0' ( $<20\%V_S$ ) 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-115  
CMOS  $\pm 50\text{ppm}$  -20 to 70C 3.3V

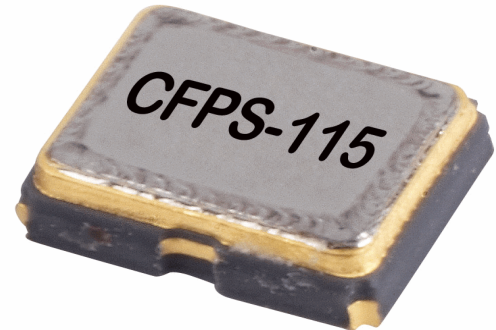
### Compliance

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

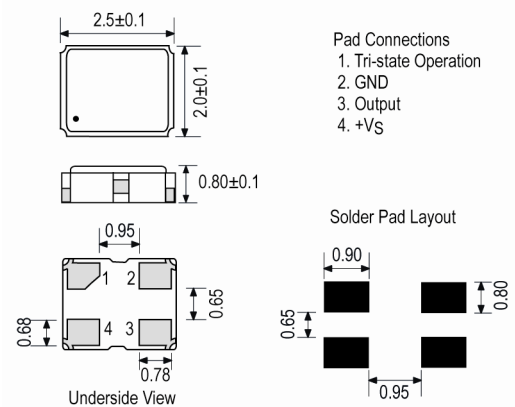
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- Pack Style: RL3K Tape & reel in accordance with EIA-481  
Pack Size: 3,000

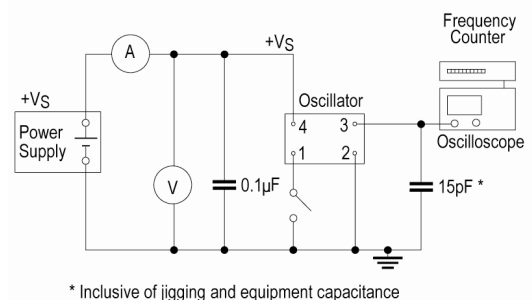
### Wave Form



### Outline (mm)

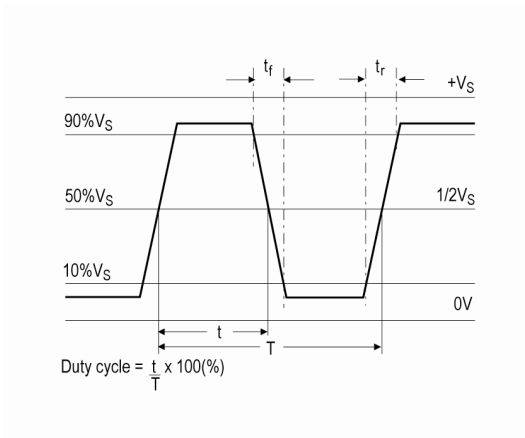


### Test Circuit





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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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