



CFPS-10y

32.768kHz output crystal oscillator in a ceramic package, hermetically sealed with a seam sealed metal lid

Suitable for real time clock applications

Model Name	Description
CFPS-102	A 1.8V version
CFPS-103	A 2.5V version
CFPS-104	A 3.3V version

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Description

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

Frequency Parameters

- Frequency: 32.768kHz
- Frequency Stability: $\pm 20.00\text{ppm}$ to $\pm 50.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max per year

Electrical Parameters

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

Operating Temperature Ranges

- 20 to 70°C
- 10 to 70°C
- 40 to 85°C

Output Details

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

Output Control

- 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

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, 20mins in 3 mutually perpendicular planes (total 4hrs)

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
- 32.768kHz CFPS-102
- CMOS $\pm 50\text{ppm}$ -10 to 70C 1.8V

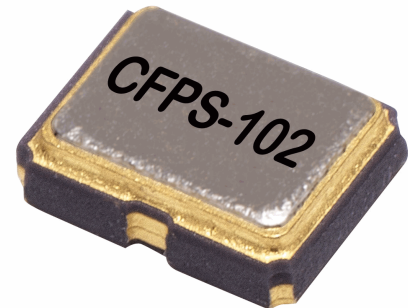
Compliance

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

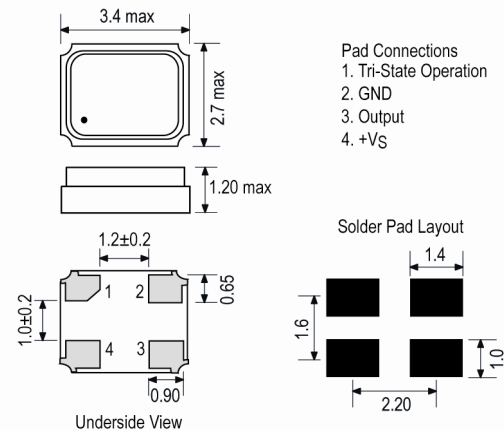
Packaging Details

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

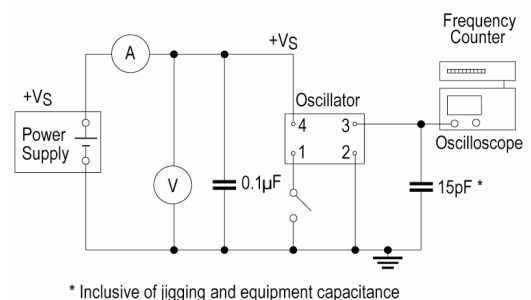
Wave Form



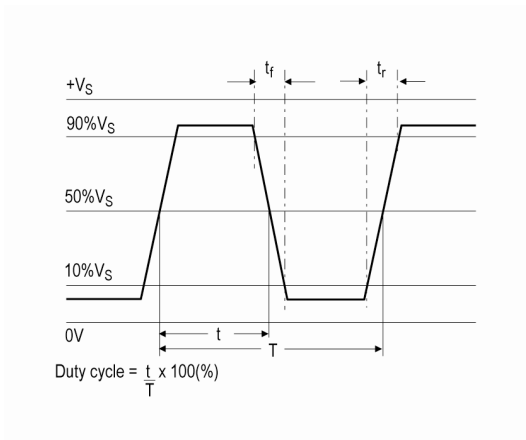
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 1.80V ±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	1.5	50	40/60%
	-20 to 70	±20.00	1.5	50	40/60%
	-10 to 70	±20.00	1.5	50	40/60%

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- Suitable for real time clock applications

Frequency Parameters

- Frequency: 32.768kHz
- Frequency Stability: $\pm 20.00\text{ppm}$ to $\pm 50.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max per year

Electrical Parameters

- Supply Voltage: $2.5\text{V} \pm 5\%$

Operating Temperature Ranges

- 20 to 70°C
- 10 to 70°C
- 40 to 85°C

Output Details

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

Output Control

- 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

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
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Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
- 32.768kHz CFPS-103
- CMOS $\pm 50\text{ppm}$ -10 to 70C 2.5V

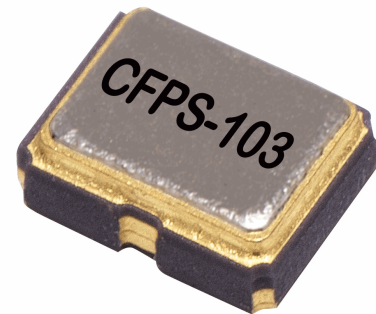
Compliance

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

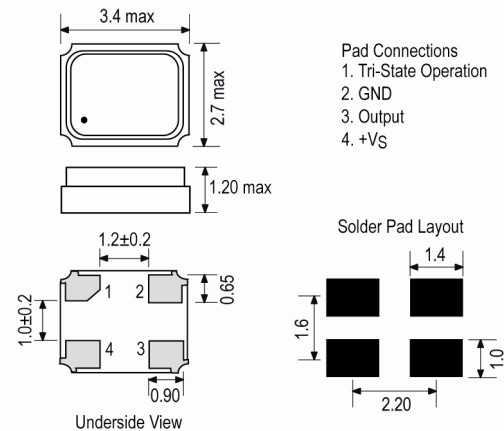
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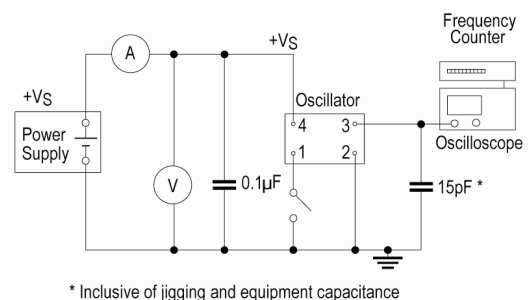
Wave Form



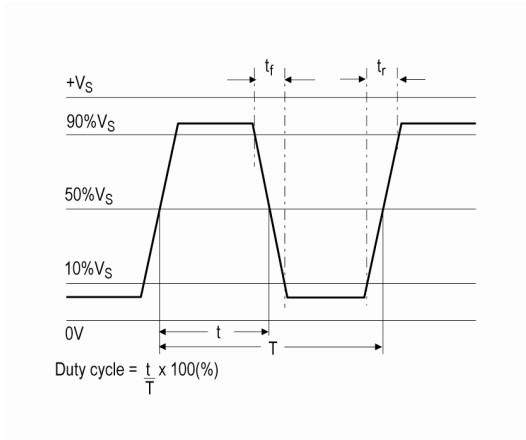
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 2.50V ±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	2.5	50	40/60%
	-20 to 70	±20.00	2.5	50	40/60%
	-10 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 $\pm 50.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max per year

Electrical Parameters

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

Operating Temperature Ranges

- 20 to 70°C
- 10 to 70°C
- 40 to 85°C

Output Details

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

Output Control

- Logic '1' (>70% VS) to pad 1 enables oscillator output
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Environmental Parameters

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Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage
- (*minimum required)
- Example
- 32.768kHz CFPS-104
- CMOS $\pm 50\text{ppm}$ -10 to 70C 3.3V

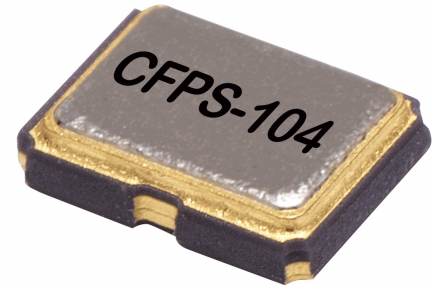
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- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

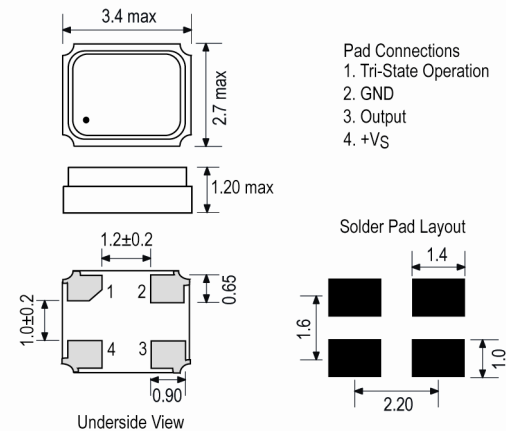
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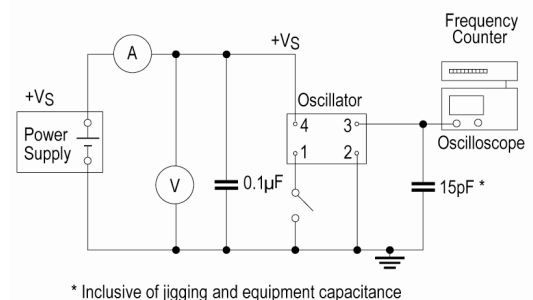
Wave Form



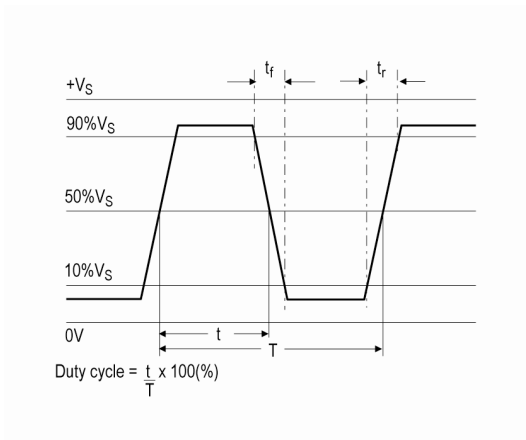
Outline (mm)



Test Circuit



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Electrical Specification - maximum limiting values 3.30V ±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%
	-20 to 70	±20.00	3.5	50	40/60%
	-10 to 70	±20.00	3.5	50	40/60%

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Sales Office Contact Details:

UK: +44 (0)1460 270200
 Germany: 0800 1808 443

France: 0800 901 383
 USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
 Web: www.iqdfrequencyproducts.com