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

IQD Frequency Products Ltd □ Station Road □ Crewkerne □ Somerset □ TA18 8AR □ United Kingdom
Tel: +44 (0)1460 270200 □ Fax: +44 (0)1460 72578 □ Email: info@iqdfrequencyproducts.com
Registered in England No: 06478545 □ VAT Registration No: GB932 4502 45

Crystal Clock Oscillator Specification
CFPS-39

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-39 programmable oscillator is the nearest equivalent fast make model.

Frequency Parameters

Frequency	2.0MHz to 125.0MHz
Frequency Stability	±25.00ppm to ±100.00ppm
Ageing	±3ppm max per year @ 25°C

Electrical Parameters

Supply Voltage	3.3V ±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: 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)

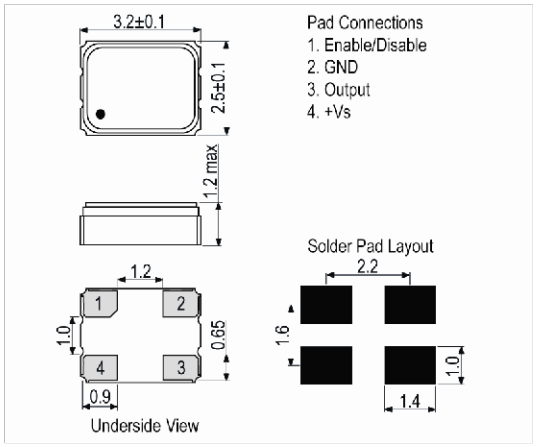
Ordering Information

- Frequency*
  Model*
  Output
  Frequency Stability*
  Operating Temperature Range*
  Supply Voltage
- Example
  10.0MHz CFPS-39
  CMOS ±50ppm –10 to 70C 3.3V

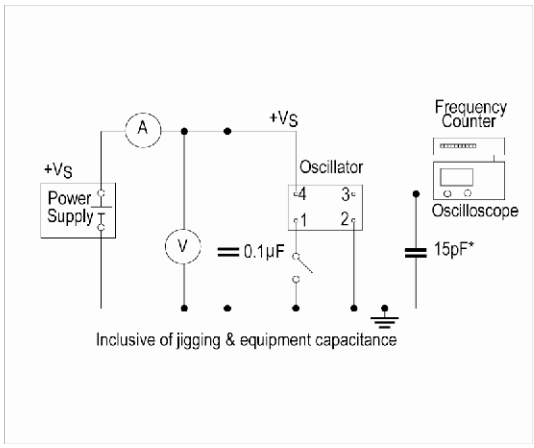
Compliance

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

Outline (mm)



Test Circuit

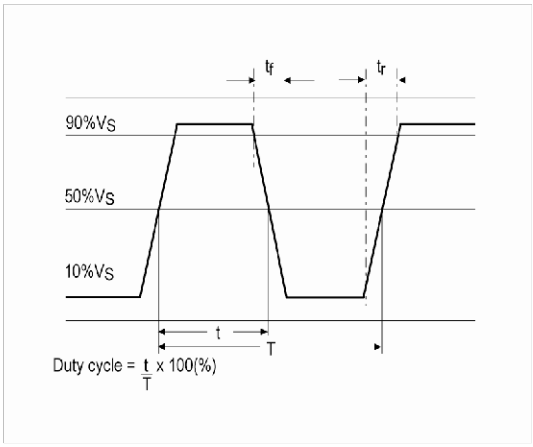


ISSUE 5; October 2018

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%

Crystal Clock Oscillator Specification
CFPS-40

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-40 programmable oscillator is the nearest equivalent fast make model.

Frequency Parameters

Frequency	2.0MHz to 125.0MHz
Frequency Stability	±25.00ppm to ±100.00ppm
Ageing	±3ppm max per year @ 25°C

Electrical Parameters

Supply Voltage	2.5V ±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 ±50ppm –10 to 70C 2.5V

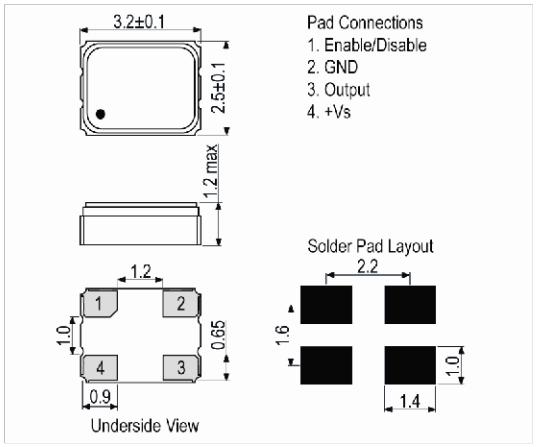
Compliance

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

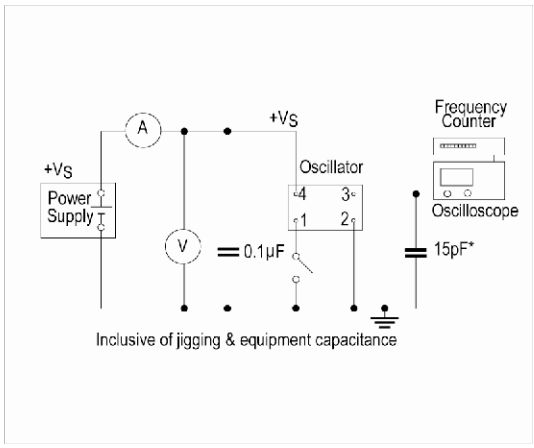
Packaging Details

- 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)

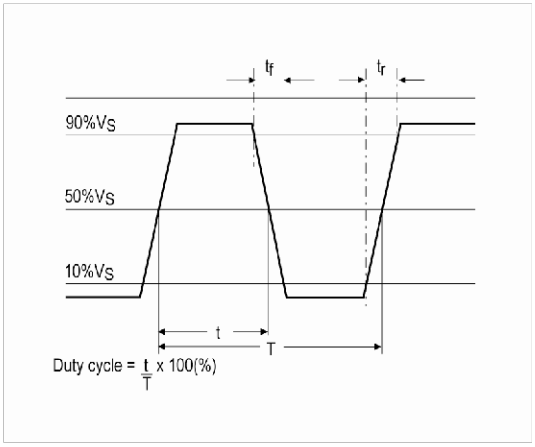


Test Circuit



ISSUE 5; October 2018

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	±25.0	6	5	40/60%
		-40 to 85	±25.0	6	5	40/60%
10.0MHz	19.999999MHz	-10 to 70	±25.0	8	5	40/60%
		-40 to 85	±25.0	8	5	40/60%
20.0MHz	31.999999MHz	-10 to 70	±25.0	8	5	40/60%
		-40 to 85	±25.0	8	5	40/60%
32.0MHz	50.0MHz	-10 to 70	±25.0	20	5	40/60%
		-40 to 85	±25.0	20	5	40/60%
50.000001MHz	125.0MHz	-10 to 70	±25.0	30	5	40/60%
		-40 to 85	±25.0	30	5	40/60%

Crystal Clock Oscillator Specification
CFPS-41

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	±25.00ppm to ±100.00ppm
Ageing	±3ppm max per year @ 25°C

Electrical Parameters

Supply Voltage	1.8V ±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)

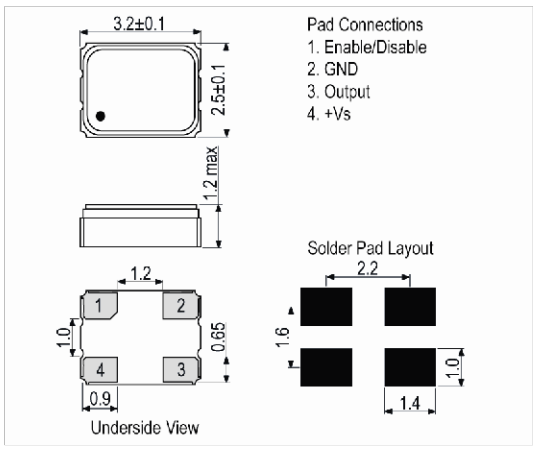
Ordering Information

- Frequency*
  Model*
  Output
  Frequency Stability*
  Operating Temperature Range*
  Supply Voltage
- Example
  10.0MHz CFPS-41
  CMOS ±50ppm –10 to 70C 1.8V

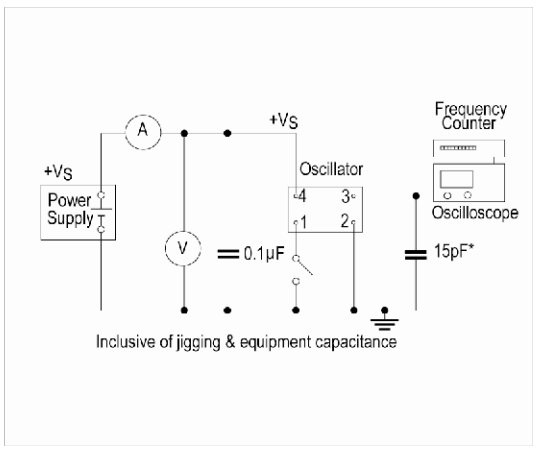
Compliance

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

Outline (mm)



Test Circuit

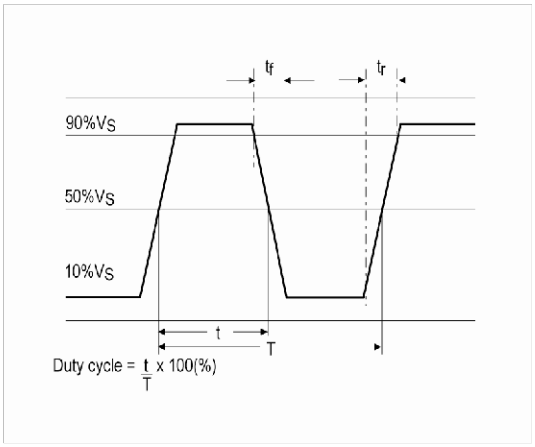


ISSUE 5; October 2018

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

This document was correct at the time of printing; please contact your local sales office for the latest version.
Click to view latest version on our website.

Sales Office Contact Details:
UK: +44 (0)1460 270200
France: 0800 901 383
Email: info@iqdfrequencyproducts.com
Germany: 0800 1808 443
USA: +1.760.318.2824
Web: www.iqdfrequencyproducts.com