

CFPS-112, -113, -114, -115 SMD CLOCK OSCILLATORS

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Description

- Low phase noise surface mount oscillators in a ceramic package with a hermetically sealed metal lid, available in a range of voltages

Package Outline

- 2.5 x 2mm

Frequency Range

- 26 to 44MHz

Output Compatibility & Load

- Tri-state CMOS
- Drive Capability 15pF max

Frequency Stabilities

- ±30ppm, ±50ppm, ±100ppm (inclusive of supply voltage and output load variations over the operating temperature range)

Operating Temperature Ranges

- 20 to 70°C (CFPS-112, -113, -114, -115)
- 40 to 85°C (CFPS-112I, -113I, -114I, 115I)

Storage Temperature Range

- 55 to 100°C

Tri-state Operation

- 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

Supply Voltage

- 1.8V CFPS-112
- 2.5V CFPS-113
- 3.0V CFPS-114
- 3.3V CFPS-115

Phase Noise - Examples:

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

Environmental

- Drop: natural drop, 3 times, from 100cm onto a hard wooden plate (30mm thick)
- Vibration: 10 to 55Hz, 1.5mm displacement (10Hz-36Hz), 4G (36Hz-55Hz) sweep time 1min/oct, duration 2hrs for each X, Y & Z axes

Marking Includes

- Model Number

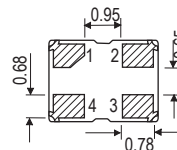
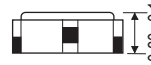
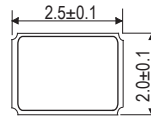
Packaging

- Bulk or Tape and Reel

Minimum Order Information Required

- Frequency + Model Number + Operating Temperature
Code + Frequency Stability

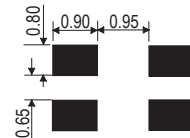
Outline (mm)



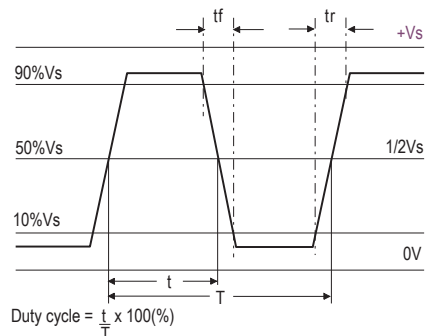
Pad Connections

- Enable/Disable
- GND
- Output
- +Vs

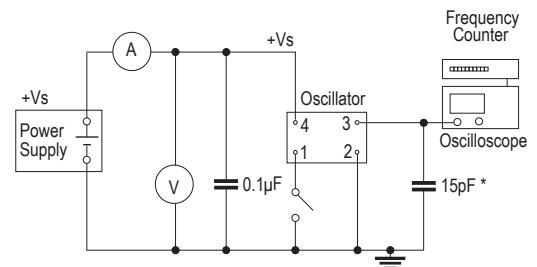
Solder pad layout



Output Waveform



Test Circuit



* Inclusive of jiggging and equipment capacitance

Electrical Specifications - maximum limiting values

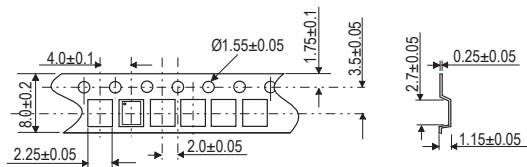
Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (10-90%)	Fall Time (tf) (90-10%)	Duty Cycle	Model Number
26.0 to 44.0MHz	±30ppm, ±50ppm, ±100ppm	1.8V ±5%	3.0mA	10ns	10ns	45/55%	CFPS-112 CFPS-112I
		2.5V ±5%	5.5mA			40/60%	CFPS-113 CFPS-113I
		3.0V ±5%	6.5mA			45/55%	CFPS-114 CFPS-114I
		3.3V ±5%	7.0mA				CFPS-115 CFPS-115I

Ordering Example 30.00kHz CFPS-115 I C
 Frequency _____
 Model No. _____
 Operating Temperature Code: I = -40 to 85°C; not applicable for -10 to 70°C _____
 Frequency Stability: H = ±30ppm, B = ±50ppm, C = ±100ppm _____

Please note that the rise and fall times listed are the maximum values we specify to cover various frequency breaks. In practice the actual values are generally lower depending upon the spot frequency chosen. For typical values please contact our sales office.

CLOCK
OSCILLATORS

Tape (mm)



Reel (mm)

