

CFPP-53, -54, -56 FAST MAKE OSCILLATORS

ISSUE 6; 1 NOVEMBER 2010 - RoHS 2002/95/EC

Description

- PLL based, one time only factory programmable for a fast lead time
- Crystal oscillator in a hermetically sealed ceramic package with a metal lid
- See CFPS-53, -54 and -56 for standard crystal oscillator alternative
- See IQMS-530 series for MEMS oscillator alternative

Frequency Range

- 1.0 to 133MHz CFPP-53
- 1.0 to 166MHz CFPP-54
- 1.0 to 200MHz CFPP-56

Output Compatibility & Load

- Tri-state CMOS
- Drive Capability 15pF max

Supply Voltage

- 1.8V CFPP-53
- 2.5V CFPP-54
- 3.3V CFPP-56

Frequency Stabilities

- ± 20 ppm, ± 25 ppm, ± 50 ppm, ± 100 ppm (inclusive of tolerance, supply voltage & output load variations over the operating temperature range)
- Note: ± 20 ppm not available over -20 to 70°C or -40 to 85°C
- Also ± 25 ppm not available over -40 to 85°C

Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C

Storage Temperature Range

- -55 to 125°C

Standby Operation

- Logic '1' ($>70\%V_S$) to pad 1 enables oscillator output
- Logic '0' ($<30\%V_S$) 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
- Stand-by current: $15\mu\text{A}$ max

Start Up Time

- 2ms max

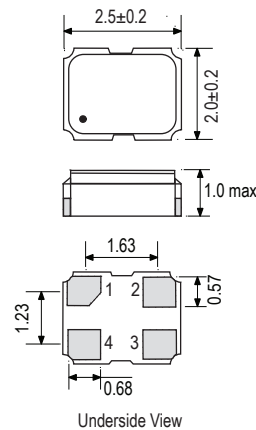
Period Jitter

- 200ps max

Packaging

- Loose in bulk pack, 1pc per bag
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

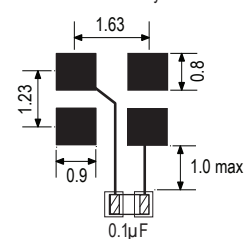
Outline (mm)



Pad Connections

1. Standby
2. GND
3. Output
4. $+V_S$

Solder Pad Layout



Ordering Information (*minimum required)

- Frequency*
- Model*
- Output Compatibility
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage

Example

- 20.00MHz CFPP-56
CMOS ± 50 ppm -40 to 85°C 3.3V

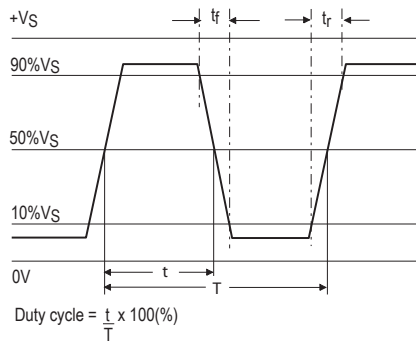


Electrical Specifications - maximum limiting values

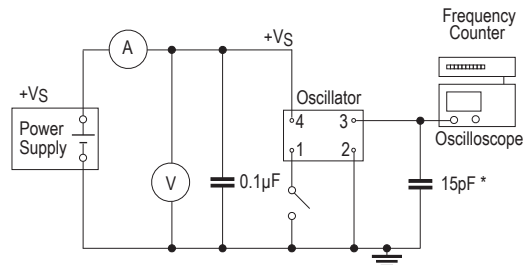
Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (10-90%)	Fall Time (tf) (90-10%)	Duty Cycle	Model Number
1.0 to <10.0MHz	±20ppm ±25ppm ±50ppm ±100ppm	1.8V ±10%	6mA	5ns	5ns	45/55%	CFPP-53
		2.5V ±10%	8mA	4ns	4ns		CFPP-54
		3.3V ±10%	10mA	3ns	3ns		CFPP-56
10.0 to <30.0MHz		1.8V ±10%	6mA	4ns	4ns		CFPP-53
		2.5V ±10%	8mA	3ns	3ns		CFPP-54
		3.3V ±10%	10mA	2ns	2ns		CFPP-56
30.0 to <75.0MHz		1.8V ±10%	8mA	4ns	4ns		CFPP-53
		2.5V ±10%	10mA	3ns	3ns		CFPP-54
		3.3V ±10%	15mA	2ns	2ns		CFPP-56
75.0 to <133.0MHz		1.8V ±10%	12mA	4ns	4ns		CFPP-53
	2.5V ±10%	15mA	3ns	3ns	CFPP-54		
	3.3V ±10%	20mA	2ns	2ns	CFPP-56		
133.0 to <166.0MHz	2.5V ±10%	15mA	3ns	3ns	CFPP-54		
	3.3V ±10%	22mA	2ns	2ns	CFPP-56		
166.0 to 200.0MHz		25mA					

Note: For other frequency/specification combinations, please contact our sales offices

Output Waveform



Test Circuit



* Inclusive of jigging and equipment capacitance

