

# 1.2V CMOS Low Jitter XO

**FD**



5.0 x 3.2mm Ceramic SMD

### Product Features

- 1 to 60 MHz Frequency Range
- <1 ps RMS jitter with fundamental or overtone design
- Low power standby mode
- Pb-free and RoHS/Green compliant

### Product Description

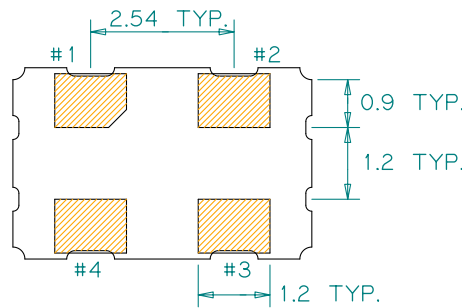
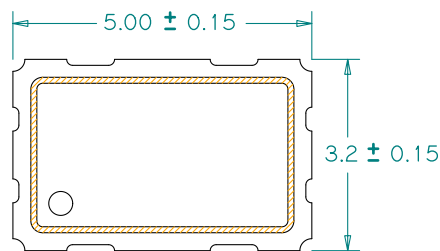
The FD Series 1.2V crystal clock oscillator achieves superb jitter and stability over a broad range of operating conditions and frequencies. The output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVCMOS/LVTTL logic levels. The device, available on tape and reel, is contained in a 5.0 x 3.2mm surface-mount ceramic package.

### Applications

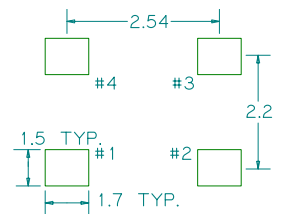
The FD Series is ideal for compact, high-density applications requiring low jitter or tight stability, including:

- Ethernet
- Fibre Channel
- Serial Attached SCSI (SAS)
- Server & Storage platforms
- SONET/SDH linecards
- T1/E1, T3/E3 linecards
- DSLAM
- 802.11 a/b/g WiFi

### Package:



### Recommended Land Pattern:

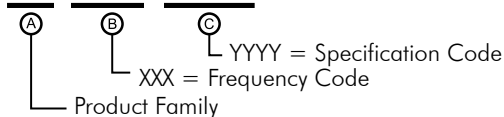


### Pin Functions:

Pin	Function
1	OE Function
2	Ground
3	Clock Output
4	V <sub>DD</sub>

### Part Ordering Information:

**FD XXX YYYY**



Following the above format, Saronix-eCera part numbers will be assigned upon confirmation of exact customer requirements.

### Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency	1		60	MHz	As specified
Supply Voltage	1.08	1.20	1.32	V	
Supply Current, Output Enabled			2	mA	1 to 30MHz
			4		30-60 MHz
Supply Current, Standby Mode			10	μA	Output Hi-Z
Frequency Stability			±20 to ±50	ppm	See Note 1 below
Operating Temperature Range	-20		+70	°C	Commercial (standard)
	-40		+85		Industrial (standard)
Output Logic 0, V <sub>OL</sub>			10% V <sub>DD</sub>	V	
Output Logic 1, V <sub>OH</sub>	90% V <sub>DD</sub>			V	
Output Load			15	pF	See Note 2 below
Duty Cycle	45		55	%	Measured 50% V <sub>DD</sub>
Rise and Fall Time			4	ns	Measured 20/80% of waveform
Jitter, Phase			1	ps RMS (1-σ)	10kHz to 20 MHz frequency band
Jitter, Accumulated			5	ps RMS (1-σ)	20.000 adjacent periods
Jitter, Total			50	ps pk-pk	100.000 random periods

#### Notes:

1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (1 year at 25°C average effective ambient temperature), shock and vibration.
2. For specifications other than those listed, please contact sales.

### Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	0.7			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3	V	Output is Hi-Z
Internal Pullup Resistance	50			kΩ	
Output Disable Delay			100	ns	
Output Enable Delay			10	ms	

### Absolute Maximum Ratings

Parameter	Min.	Typ.	Max.	Units	Notes
Storage Temperature	-55		+125	°C	

For the latest product information visit: <http://www.pericom.com/products/timing/oscillators/FD1.2/>

For test circuit go to: [http://www.pericom.com/pdf/sre/tc\\_hcm0s2.pdf](http://www.pericom.com/pdf/sre/tc_hcm0s2.pdf)

For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

For tape and reel information go to: [http://www.pericom.com/pdf/sre/tr\\_5032\\_xo.pdf](http://www.pericom.com/pdf/sre/tr_5032_xo.pdf)