

2.5 x 2.0mm

# 2.5V CMOS Low Jitter XO





2.5 x 2.0mm Ceramic SMD

### **Product Features**

- •1 to 156.25 MHz Frequency Range
- 1 ps RMS jitter with fundamental or overtone design
- •2.5V CMOS compatible logic levels
- Designed for standard reflow and washing techniques
- •Low power standby mode: 10 µA max
- Pb-free and RoHS/Green compliant

### **Product Description**

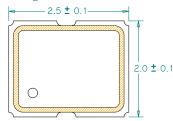
The FJ Series crystal clock oscillator achieves superb jitter and stability over a broad range of operating conditions and frequencies. The output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVCMOS logic levels. The device, available on tape and reel, is contained in a 2.5 x 2.0mm surface-mount ceramic package.

### **Applications**

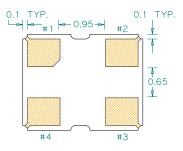
Ideal for compact, high-density applications:

- •WLAN
- HBA
- Portable Multimedia Player (PMP)
- Notebook Computer
- SDIO / PCMIA CARD
- USB BT Interface
- Bluetooth

### Package:





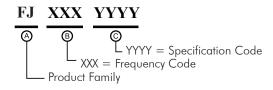


# Recommended Land Pattern: 1.7 1.7 1.0 TYP. #1 1.2 TYP.

### **Pin Functions:**

Pin	Function				
1	OE				
2	Ground				
3	Clock Output				
4	$V_{\mathrm{DD}}$				

### **Part Ordering Information:**



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

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FJ Series Crystal Clock Oscillator (XO) 2.5 x 2.0mm

### **Electrical Performance**

Parameter	Min.	Тур.	Max.	Units	Notes
Output Frequency	1		156.25	MHz	As specified
Supply Voltage	2.25	2.5	2.75	V	
Supply Current, Output Enabled			5	mA	1 to 156.25 MHz
Supply Current, Standby Mode			10	μΑ	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	
Duty Cycle	45		55	%	Measured 50% V <sub>DD</sub>
Rise and Fall Time			5	ns	Measured 20/80% of waveform
Jitter, Phase			1	ps RMS (1-σ)	12kHz 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

- 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.
- For specifications othere than those listed, please contact sales.

### **Output Enable / Disable Function**

Parameter	Min.	Тур.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	0.7 V <sub>DD</sub>			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 V <sub>DD</sub>	V	Output is Hi-Z
Internal Pullup Resistance	30			kΩ	
Output Disable Delay			100	ns	
Output Enable Delay			10	ms	

### **Absolute Maximum Ratings**

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

For the latest product information visit: http://www.pericom.com/products/timing/oscillators/FJ2.5/

For test circuit go to: <a href="http://www.pericom.com/pdf/sre/tc\_hcmos2.pdf">http://www.pericom.com/pdf/sre/tc\_hcmos2.pdf</a>

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\_2520\_xo.pdf



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