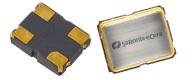


# FK Series Crystal Clock Oscillator (XO) 3.2 x 2.5mm

# **3.3V CMOS Low Jitter XO**





3.2 x 2.5mm Ceramic SMD

#### **Product Features**

- •1 to 156.25 MHz Frequency Range
- •<1 ps RMS jitter</p>
- •3.3V CMOS compatible logic levels
- Designed for standard reflow and washing techniques
- Low power standby mode
- Pb-free and RoHS/Green compliant

# **Product Description**

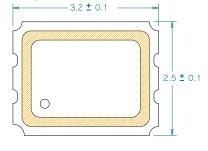
The FK Series 3.3V crystal clock oscillator achieves superb stability and low power consumption over a broad range of operating conditions and frequencies. The low jitter output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVCMOS logic levels. The device, available on tape and reel, is contained in a 3.2 x 2.5mm surface-mount ceramic package.

# Applications

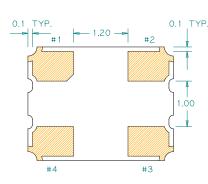
Ideal for compact, high-density applications requiring low power or tight stability, including:

- Network adapter cards
- Portable Multimedia Devices
- Hard Disk Drives
- •GPS/Navigation
- Bluetooth
- •802.11a/b/g WiFi

#### **Package:**







# Recommended Land Pattern: $2.12 \rightarrow 4$ $#4 \qquad #3 \qquad 1.6$ $1.2 \quad TYP.$ $1.5 \quad TYP.$

#### **Pin Functions:**

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

# **Part Ordering Information:**



B C YYYY = Specification Code XXX = Frequency Code Product Family

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

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# SaRonix-eCera

# FK Series Crystal Clock Oscillator (XO) 3.2 x 2.5mm

#### **Electrical Performance**

Parameter		Min.	Тур.	Max.	Units	Notes
Output Frequen	ıcy	1		156.25	MHz	As specified
Supply Voltage		2.97	3.3	3.63	V	
Supply Current, Output Enabled				10		1 to 50 MHz
				18	mA	50 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	C	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 T	Rise and Fall Time			5	ns	Measured 10/90% of waveform
Jitter, Phase	1 to 156.25 MHz			1	ps RMS (1-σ)	12kHz to 20 MHz frequency band
Jitter, Accumulated	up to 75 MHz			5	$\mathbf{p} \in \mathbf{DMS}(1, \mathbf{r})$	20.000 adjacent periods
	75 to 156.25 MHz			3	ps RMS (1-σ)	
Jitter, Total	up to 75 MHz			50	na nlt nlt	100 000 rendem periods
	75 to 156.25 MHz			30	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 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	50			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/FK3.3/

For test circuit go to: http://www.pericom.com/pdf/sre/tc\_hcmos2.pdf

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

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr\_3225\_xo.pdf

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