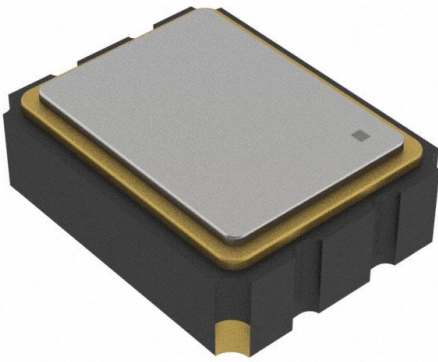


# FK3970001 Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	FK3970001-DG
Manufacturer	<a href="#">Diodes Incorporated</a>
Manufacturer Product Number	FK3970001
Description	XTAL OSC XO 39.7204MHZ CMOS
Detailed Description	39.7204 MHz XO (Standard) CMOS Oscillator 3.3V 4-SMD, No Lead



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

FK3970001

Series:

SaRonix-eCera™ FK

Base Resonator:

Crystal

Frequency:

39.7204 MHz

Voltage - Supply:

3.3V

Operating Temperature:

-40°C ~ 85°C

Size / Dimension:

0.126" L x 0.098" W (3.20mm x 2.50mm)

Manufacturer:

Diodes Incorporated

Product Status:

Active

Type:

XO (Standard)

Output:

CMOS

Absolute Pull Range (APR):

-

Package / Case:

4-SMD, No Lead

Height - Seated (Max):

0.045" (1.15mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

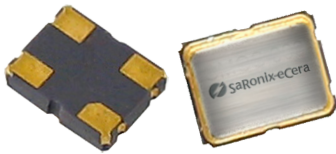
Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

## 3.3V CMOS Low Jitter XO

**FK**


3.2 x 2.5mm Ceramic SMD

### Product Features

- 1 to 156.25 MHz Frequency Range
- <1 ps RMS jitter
- 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

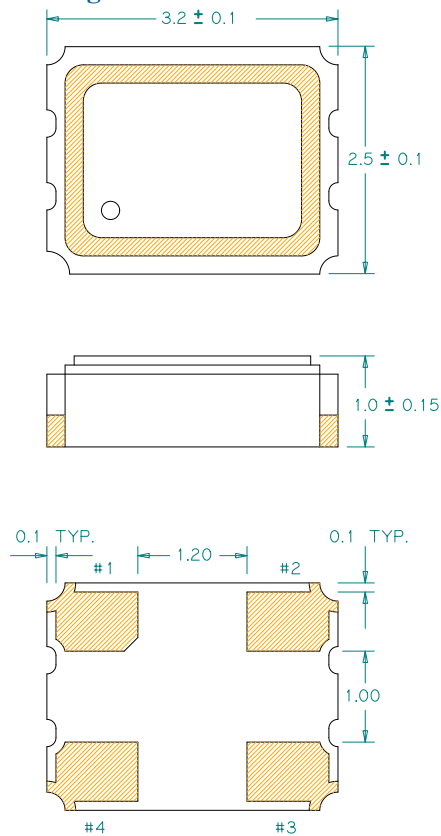
The FK Series 3.3V crystal clock oscillator achieves superb stability and low power consumption over a broad range of operating conditions and frequencies. The low jitter output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVCMOS logic levels. The device, available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

### Applications

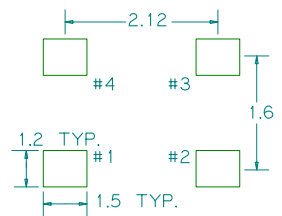
Ideal for compact, high-density applications requiring low power or tight stability, including:

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

### Package:



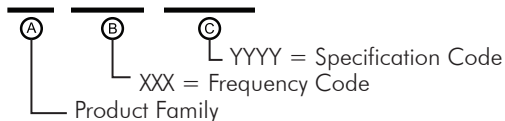
### Recommended Land Pattern:



### Pin Functions:

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

### Part Ordering Information:

**FK XXX YYYY**


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

3.3V CMOS Low Jitter XO **FK**
**FK Series Crystal Clock Oscillator (XO)**  
**3.2 x 2.5mm**

### Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency	1		156.25	MHz	As specified
Supply Voltage	2.97	3.3	3.63	V	
Supply Current, Output Enabled			10	mA	1 to 50 MHz
			18		50 to 156.25 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	
Duty Cycle	45		55	%	Measured 50% V <sub>DD</sub>
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	ps RMS (1-σ)	20.000 adjacent periods
	75 to 156.25 MHz		3		
Jitter, Total	up to 75 MHz		50	ps pk-pk	100.000 random periods
	75 to 156.25 MHz		30		

**Notes:**

- 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 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 <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.	Typ.	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\\_hcm052.pdf](http://www.pericom.com/pdf/sre/tc_hcm052.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\\_3225\\_xo.pdf](http://www.pericom.com/pdf/sre/tr_3225_xo.pdf)

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