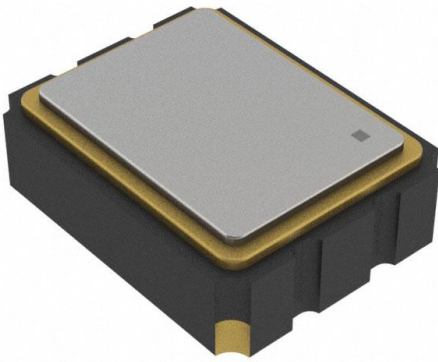


# FK7770003 Datasheet

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



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

DiGi Electronics Part Number	FK7770003-DG
Manufacturer	<a href="#">Diodes Incorporated</a>
Manufacturer Product Number	FK7770003
Description	XTAL OSC XO 77.7600MHZ CMOS SMD
Detailed Description	77.76 MHz XO (Standard) CMOS Oscillator 3.3V Enable/Disable 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:

FK7770003

Series:

SaRonix-eCera™ FK

Base Resonator:

Crystal

Frequency:

77.76 MHz

Output:

CMOS

Frequency Stability:

±50ppm

Operating Temperature:

-40°C ~ 85°C

Ratings:

-

Package / Case:

4-SMD, No Lead

Height - Seated (Max):

0.045" (1.15mm)

Manufacturer:

Diodes Incorporated

Product Status:

Active

Type:

XO (Standard)

Function:

Enable/Disable

Voltage - Supply:

3.3V

Absolute Pull Range (APR):

-

Current - Supply (Max):

18mA

Mounting Type:

Surface Mount

Size / Dimension:

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

Current - Supply (Disable) (Max):

10µA

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

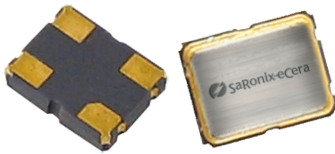
Moisture Sensitivity Level (MSL):

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

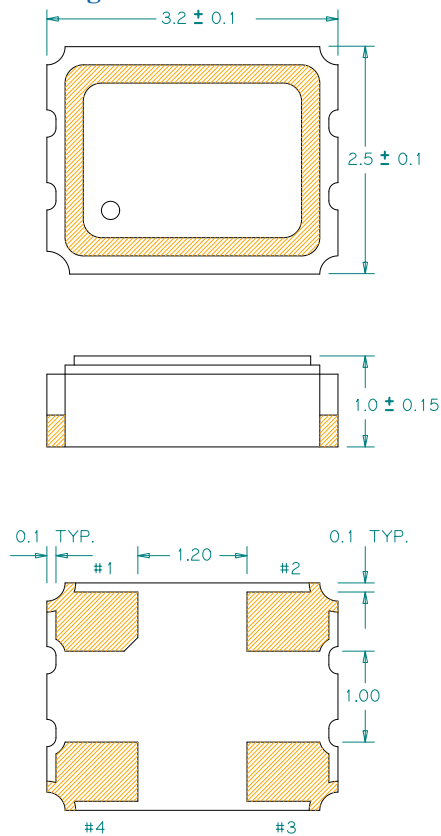
The FK Series 3.3V crystal clock oscillator achieves superb stability and low power consumption over a broad range of operating conditions and frequencies. The low jitter output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVCMOS logic levels. The device, available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

### Applications

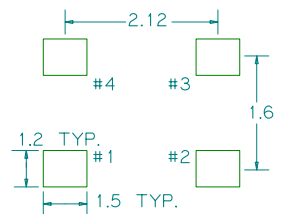
Ideal for compact, high-density applications requiring low power or tight stability, including:

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

### Package:



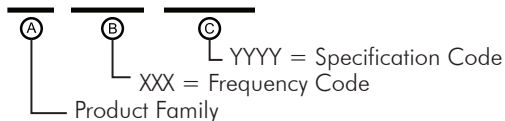
### Recommended Land Pattern:



### 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	$\mu$ A	Output Hi-Z
Frequency Stability			$\pm 20$ to $\pm 50$	ppm	See Note 1 below
Operating Temperature Range	-20		+70	$^{\circ}$ C	Commercial (standard)
	-40		+85		Industrial (standard)
Output Logic 0, $V_{OL}$			10% $V_{DD}$	V	
Output Logic 1, $V_{OH}$	90% $V_{DD}$			V	
Output Load			15	pF	
Duty Cycle	45		55	%	Measured 50% $V_{DD}$
Rise and Fall Time			5	ns	Measured 10/90% of waveform
Jitter, Phase	1 to 156.25 MHz		1	ps RMS (1- $\sigma$ )	12kHz to 20 MHz frequency band
Jitter, Accumulated	up to 75 MHz		5	ps RMS (1- $\sigma$ )	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 $^{\circ}$ C), aging (1 year at 25 $^{\circ}$ 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 $V_{DD}$			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 $V_{DD}$	V	Output is Hi-Z
Internal Pullup Resistance	50			k $\Omega$	
Output Disable Delay			100	ns	
Output Enable Delay			10	ms	

### Absolute Maximum Ratings

Parameter	Min.	Typ.	Max.	Units	Notes
Storage Temperature	-55		+125	$^{\circ}$ 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](http://www.pericom.com/pdf/sre/tc_hcmos2.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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