



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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3.3V CMOS Low-Jitter 2.048 MHz VoIP XO

FNGEPO002



7.0 x 5.0mm Ceramic SMD

ASSP XO™ for Networking



Product Features

- Very low Pk to Pk jitter - 50ps Max
- Low output current - 15mA Max
- Low power standby mode
- RoHS Compliant

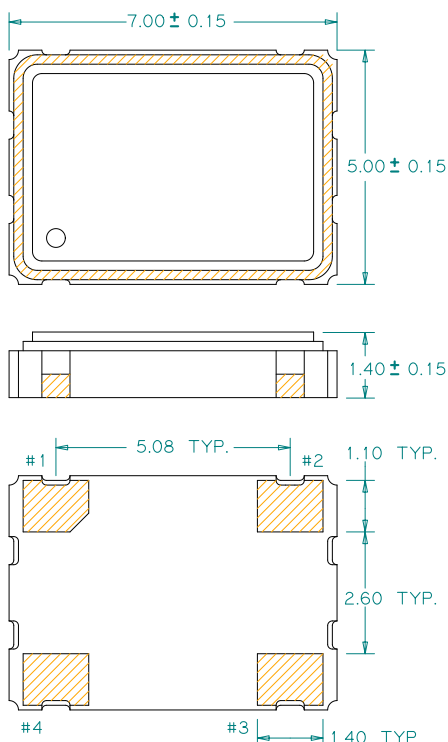
Product Description

This is an enhanced 3.3V, 2.048MHz crystal clock oscillator with superb jitter and low operating current for reference clock applications in VoIP Gateway applications.

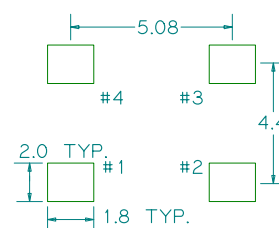
Applications

- PON VoIP Gateway

Package: (Scale: none, Dimensions are in mm)



Recommended Land Pattern:



Pin Functions:

Pin	Function
1	OE Function
2	Ground
3	Clock Output
4	V _{DD}

*Extended high frequency power decoupling is recommended (see test circuit for minimum recommendation). To ensure optimal performance, do not route RF traces beneath the package.

Part Ordering Information:
FNGEPO002

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		2.048		MHz	
Supply Voltage V_{DD}	2.97	3.3	3.63	V	
Supply Current, Output Enabled			15	mA	
Supply Current, Output Disabled			10	μ A	
Frequency Stability			± 50	ppm	See Note 1 below
Operating Temperature Range	-20		+70	°C	
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			7	ns	Measured 20/80% of waveform
Jitter, pk-pk			50	ps	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_{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	30			k Ω	
Output Disable Delay			50	ns	
Output Enable Delay			2	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/crystals-and-crystal-oscillators/assp-xo/?part=FNGEPO002>

For test circuit go to: http://www.pericom.com/pdf/sre/tc_hcmos.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_7050_xo.pdf