

3.3V CMOS Low-Jitter 133.330 MHz DDR XO

FNDDR1133



7.0 x 5.0mm Ceramic SMD

ASSP XO™ for Networking



Product Features

- Very low Pk to Pk jitter - 30ps Max
- Low output current - 20mA Max
- Low power standby mode
- RoHS Compliant

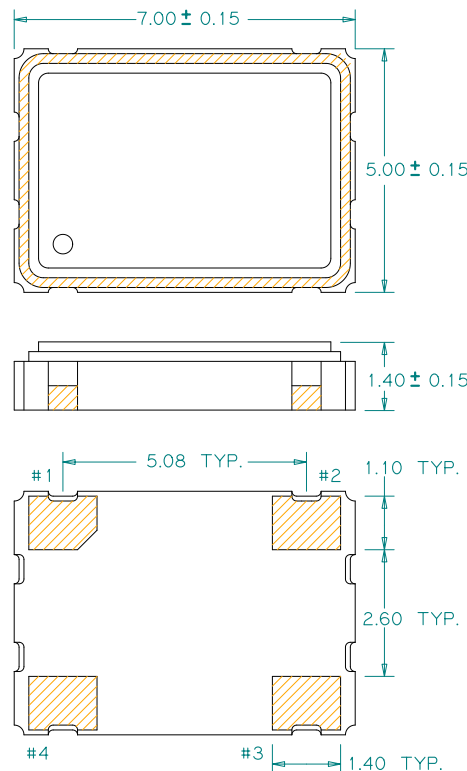
Product Description

This is an enhanced high frequency 3.3V, 133.33MHz crystal clock oscillator with superb jitter and low operating current for DDR cache memory applications in Serial Attached SCSI RAID controller/Host Bus Adapter.

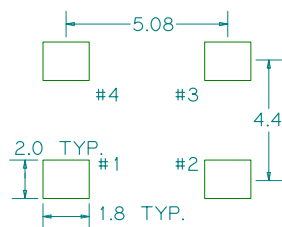
Applications

- Serial Attached SCSI 3G/6G RAID Controller
- Serial Attached SCSI 3G/6G Host Bus Adapter

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:
FNDDR1133

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		133.330		MHz	
Supply Voltage V_{DD}	2.97	3.3	3.63	V	
Supply Current, Output Enabled			20	mA	
Supply Current, Output Disabled			10	μA	
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			2	ns	Measured 20/80% of waveform
Jitter, Phase, RMS(1-σ)			1	ps	12kHz~20MHz Frequency Band
Jitter, pk-pk			30	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			kΩ	
Output Disable Delay			200	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=FNDDR1133>

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