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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SaRonix-eCera™

3.3V HCSL Low Jitter 100MHz PCIe® 2.0 XO — SHPCIE100

7.0 x 5.0mm Ceramic SMD

ASSP XO™ for Networking

Product Features

- Provides 100 MHz HCSL output for interfacing to standard PCIe® devices
- Very low PCIe 2.0 jitter - 1.8ps RMS (typ.)
- Thicker crystal for improved reliability
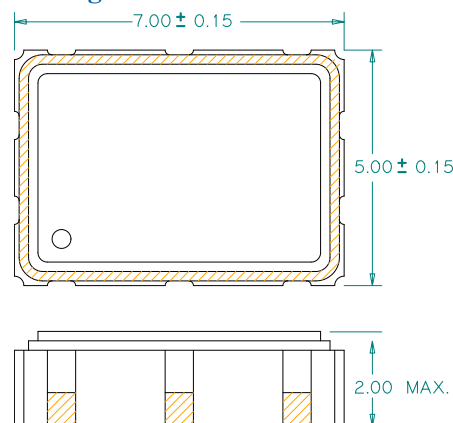- Pb-free & RoHS compliant
- Industrial temperature range

Product Description

The SHPCIE100 3.3V crystal clock oscillator achieves superb jitter for PCIe® 1.0 & 2.0 applications. The output clock signal, generated internally with a patented oscillator design, is compatible with HCSL logic levels. The device, available on tape and reel, is contained in a 7.0 x 5.0mm surface-mount ceramic package.
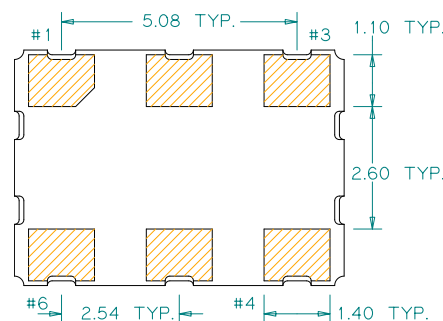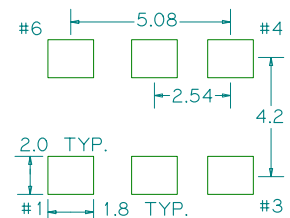
Applications

- Server
- Network Switch/Router
- Telecom Switch
- Media Box
- Graphics Card
- Host Bus Adapter

Package:

Recommended Land Pattern:

Pin Functions:

Pin	Function
1	OE Function
2	N/C
3	Ground
4	OUT
5	$\overline{\text{OUT}}$
6	V_{CC}

*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:
SHPCIE100

PERICOM®
Enabling Serial Connectivity

10-0021
All specifications are subject to change without notice.   SHPCIE100   Rev D   05/04/10   1

SaRonix-eCera™

ASSP XO™
Application Specific Crystal Oscillator 7.0 x 5.0mm

Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		100		MHz	
Supply Voltage	2.97	3.30	3.63	V	
Supply Current, Output Enabled			40	mA	
Supply Current, Output Disabled			15	mA	
Frequency Stability			±50	ppm	See Note 1 below
Operating Temperature Range	-40		+85	°C	Industrial
Output Logic 0, V_{OL}	-0.15	0		V	
Output Logic 1, V_{OH}	0.66	0.7	0.9	V	
Output Load	$R_s = 33\Omega$, $R_p = 50\Omega$, $C_L = 2pF$				output requires termination
Duty Cycle	45		55	%	Measured 50% of waveform
Rise and Fall Time			0.7	ns	Maximum measured from $V_{OL} = 0.175V$ to $V_{OH} = 0.525V$
Jitter, Phase RMS (1-σ)		1.8	2.5	ps	As defined by PCI-SIG for PCIe® 2.0 reference clock
Jitter, pk–pk		27	40	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 (5 year at 40°C average effective ambient temperature), shock and vibration.
2. For specifications othere than those listed, please contact sales.

Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	2.2			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.8	V	Outputs disabled to Hi-Z
Output Disable Delay			200	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/SHPCIE100/

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

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

For typical phase noise go to: http://www.pericom.com/pdf/sre/pn_SHPCIE100.pdf

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr_7050.pdf

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