

Product Overview

NB3L202K: 2.5V, 3.3V Differential 1:2 HCSL Fanout Buffer

For complete documentation, see the data sheet.

The NB3L202K is a differential 1:2 Clock fanout buffer with High-speed Current Steering Logic (HCSL) outputs. Inputs can directly accept differential LVPECL, LVDS, and HCSL signals. Single-ended LVPECL, HCSL, LVCMOS, or LVTTTL levels are accepted with a proper external V_{th} reference supply per Figures 4 and 6. The input signal will be translated to HCSL and provides two identical copies operating up to 350 MHz.

The NB3L202K is optimized for ultra-low phase noise, propagation delay variation and low output-to-output skew, and is DB200H compliant. As such, system designers can take advantage of the NB3L202K's performance to distribute low skew clocks across the backplane or the motherboard making it ideal for Clock and Data distribution applications such as PCI Express, FBDIMM, Networking, Mobile Computing, Gigabit Ethernet, etc.

Output drive current is set by connecting a 475 resistor from IREF (Pin 10) to GND per Figure 11. Outputs can also interface to LVDS receivers when terminated per Figure 12.

Features

- Maximum Input Clock Frequency > 350 MHz
- 2.5 V \pm 5% / 3.3 V \pm 10% Supply Voltage Operation
- 2 HCSL Outputs
- DB200H Compliant
- Individual OE Control Pin for Each Bank of Outputs
- 100 ps Max Output-to-Output Skew Performance
- 1 ns Typical Propagation Delay
- 500 ps Typical Rise and Fall Times
- 80 fs Maximum Additive Phase Jitter RMS
- PCIe Gen 3 and Gen 4 Compliant

For more features, see the data sheet

Applications

- Mobile Computing
- Networking
- Gigabit Ethernet
- FBDIMM
- PCI Express Gen 3 and Gen 4

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V_{CC} Typ (V)	t_{jitter}^R MS Typ (ps)	$t_{skew(0-9)}$ Max (ps)	t_{pd} Typ (ns)	t_R & t_F Max (ps)	f_{max}^{Cl} Typ (MHz)	f_{max}^D Typ (Mbps)	Package Type
NB3L202KMNG		Pb-free Halide free	Active	Buffer	1	1:2	HC SL	HCSL	3.3	0.046	20	1	700	350		QFN-16
							LVD S		2.5							
							LVP ECL									
NB3L202KMNTXG		Pb-free Halide free	Active	Buffer	1	1:2	LVD S HC SL	HCSL	3.3 2.5	0.046	20	1	700	350		QFN-16

For more information please contact your local sales support at www.onsemi.com.

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