



Product Overview

NB3N201S: 3.3V Differential Multipoint Low Voltage M-LVDS Driver Receiver

For complete documentation, see the data sheet

Product Description

The NB3N201S and NB3N206S are pure 3.3 V supply differential Multipoint Low Voltage (M-LVDS) line Drivers and Receivers. Devices NB3N201S and NB3N206S are TIA/EIA-899 compliant. NB3N201S offers the Type 1 receiver threshold at 0.0 V. NB3N206S offers the Type 2 receiver threshold at 0.1 V.

These devices have Type-1 and Type-2 receivers that detect the bus state with as little as 50 mV of differential input voltage over a common-mode voltage range of -1 V to 3.4 V. The Type-1 receivers have near zero thresholds (± 50 mV) and exhibit 25 mV of differential input voltage hysteresis to prevent output oscillations with slowly changing signals or loss of input. Type-2 receivers include an offset threshold to provide a detectable voltage under open-circuit, idle-bus, and other faults conditions.

NB3N201S and NB3N206S support Simplex or Half Duplex bus configurations.

Features

- Low Voltage Differential 30 to 55 Line Drivers and Receivers for Signaling Rates Up to 200 Mbps
- Type 1 Receivers Incorporate 25 mV of Hysteresis
- Type 2 Receivers Provide an Offset (100 mV) Threshold to Detect Open Circuit and Idle Bus Conditions
- Meets or Exceeds the MLVDS Standard TIA/EIA-899 for Multipoint Data Interchange
- Controlled Driver Output Voltage Transition Times for Improved Signal Quality
- -1 V to 3.4 V Common Mode Voltage Range Allows Data Transfer With up to 2 V of Ground Noise
- Bus Pins High Impedance When Disabled or VCC less than 1.5 V
- MLVDS Bus Power Up/Down Glitch Free
- Operating range: VCC = 3.3 \pm 10% V (3.0 to 3.6 V)
- Operation from -40C to 85C

Applications

- Low Power High Speed Short-Reach Alternative to TIA/EIA-485
- Backplane or Cabled Multipoint Data and Clock Transmission
- Cellular Base Stations
- Central Office Switches
- Network Switches and Routers

Part Electrical Specifications

Product	Compliance	Status	Type	Channels	Input / Output Ratio	Input Level	Output Level	V _{CC} Typ (V)	t _{Jitter} MS Typ (ps)	t _{skew(o-g)} Max (ps)	t _{pd} Typ (ns)	t _R & t _F Max (ps)	f _{max} Clock Typ (MHz)	f _{max} Data Typ (Mbps)	Package Type
NB3N201SDG	Pb-free Halide free	Active	Drivers	1	1:1	M-LVDS	M-LVDS	3.3	$\frac{2}{4}$		$\frac{1.5}{4}$	$\frac{1600}{2300}$			SOIC-8
NB3N201SDR2G	Pb-free Halide free	Active	Drivers	1	1:1	M-LVDS	M-LVDS	3.3	$\frac{2}{4}$		$\frac{1.5}{4}$	$\frac{1600}{2300}$			SOIC-8

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

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