Low-voltage differential signaling Driver and Receiver

MODULE

3DLV3302VS1619

4-channel Dual Driver and Receiver

Features

- >400 Mbps (200 MHz) switching rates
- ±450 mV differential signalling
- 3.3 V power supply
- Ultra low power dissipation
- 0.6 ns maximum differential skew (Driver)
- 4.5 ns maximum propagation delay (Driver)
- 0.2 ns differential skew -typical (Receiver)
- 6 ns maximum propagation delay (Receiver)
- Compatible with IEEE 1596.3 SCI LVDS standard
- Conforms to ANSI/TIA/EIA-644 LVDS standard
- Integrated 110-Ω Line Termination Resistors
- Footprint compatible with 18 lead flatpack
- Cold sparing all I/O pins
- Available Temperature range
  0°C to 70°C
  -40°C to +85°C
  -55°C to +125°C
- Radiation tolerance
  TID: >100 Krad(Si)
  SEL LET threshold: >80 MeV-cm2/mg
- Space Qualified

General description

The 3DLV3302VS1619 is Dual CMOS differential line driver and Dual CMOS differential line receiver, designed for applications requiring ultra low power dissipation and high data rates. The device is designed to support data rates in excess of 400 Mbps (200 MHz) utilizing Low Voltage Differential Signaling (LVDS) technology.

The Dual driver accepts LVTT/LVC莫斯 input levels and translates them to low voltage (450 mV) differential output signals, and the Dual receiver accepts low voltage (350 mV typical) differential input signals and translates them to 3V CMOS output levels.

The 3DLV3302VS1619 provides a new alternative to high power pseudo-ECL devices for high speed point-to-point interface applications.

LVDS Module
Low-voltage differential signaling Driver and Receiver

MODULE

3DLV3302VS1619

4-channel Dual Driver and Receiver

Mechanical Drawing

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage</td>
<td>VDD</td>
<td>3.0</td>
<td>3.6</td>
<td>V</td>
</tr>
<tr>
<td>Input High Voltage</td>
<td>VIN</td>
<td>2.0</td>
<td>VDD</td>
<td>V</td>
</tr>
<tr>
<td>Input Low Voltage</td>
<td>VIL</td>
<td>0.8</td>
<td>GND</td>
<td>V</td>
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</table>

DC OPERATING CONDITIONS

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Supply Voltage</td>
<td>VDD</td>
<td>-0.5</td>
<td>4.0</td>
<td>V</td>
</tr>
<tr>
<td>Input Voltage (Din;EN)</td>
<td>VIN</td>
<td>-0.5</td>
<td>VDD</td>
<td>V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>Tstg</td>
<td>-65</td>
<td>150</td>
<td>°C</td>
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</tbody>
</table>

ABSOLUTE MAXIMUM RATINGS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Supply Voltage</td>
<td>VDD</td>
<td>-0.5</td>
<td>V</td>
</tr>
<tr>
<td>Offset Voltage(Driver)</td>
<td>VOD1</td>
<td>450</td>
<td>mV</td>
</tr>
<tr>
<td>Differential Input High Threshold(Receiver)</td>
<td>VTH</td>
<td>1.375</td>
<td>V</td>
</tr>
<tr>
<td>Differential Input Low Threshold(Receiver)</td>
<td>VTL</td>
<td>-100</td>
<td>mV</td>
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DC Characteristics

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Note:
Permanent device damage may occur if "ABSOLUTE MAXIMUM RATINGS" are exceeded. Functional operation should be restricted to recommended operating condition. Exposure to higher than recommended voltage for extended periods of time could affect device reliability.

3DLV3302VS1619

Temperature Range
C = 0°C ~ +70°C
I = -40°C ~ +85°C
M = -55°C ~ +125°C

Quality Level
N = Commercial Grade
B = Industrial Grade
S = Space Grade
C = Custom

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LVDS Module

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