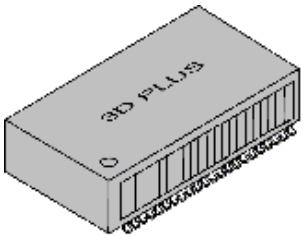
Low-voltage differential signaling Driver and Receiver MODULE

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

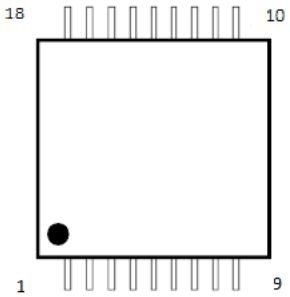
General description

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 LVTTL/LVCMOS 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.

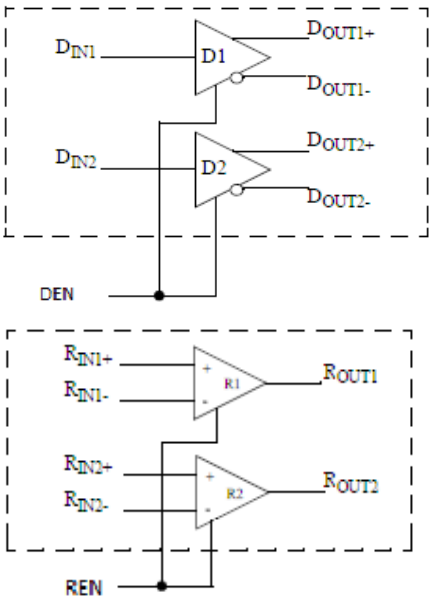
Pin Assignment (Top View)

SOP 18 (Pitch : 1.27 mm)



1	Rin1-	10	DEN
2	Rin1+	11	Din1
3	Rin2+	12	Din2
4	Rin2-	13	DEN
5	REN	14	Vdd
6	Dout2-	15	GND
7	Dout2+	16	Rout2
8	Dout1+	17	Rout1
9	Dout1-	18	REN

FUNCTIONAL Block Diagram



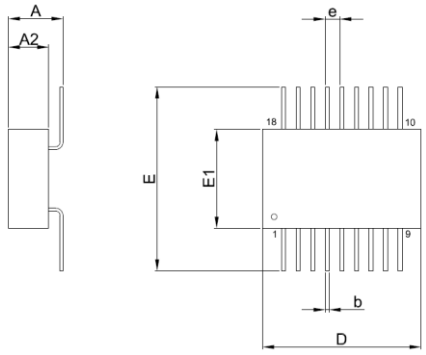
LVDS Driver and Receiver MODULE
4 Lines-SOP

Low-voltage differential signaling Driver and Receiver MODULE

3DLV3302VS1619

4-channel Dual Driver and Receiver

Mechanical Drawing



	Min	Max
A	4.30	5.00
A2	3.20	3.60
D	13.60	14.00
E	15.90	16,10
E1	8.50	8.70
b	0.35	
e	1.27	
Dimension (mm)		

Max. weight : 2.5 g

DC OPERATING CONDITIONS

Parameter	Symbol	Min	Max	Unit
Supply Voltage	V_{DD}	3.0	3.6	V
Input High Voltage	VIH	2.0	V_{DD}	V
Input Low Voltage	V_{IL}	GND	0.8	V

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Supply Voltage	V_{DD}	-0.5 to 4.0	V
Input Voltage (Din;EN)	Vin	-0.5 to V_{DD} +0.5	V
Storage temperature	Tstg	-65 to 150	°C

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

DC Characteristics

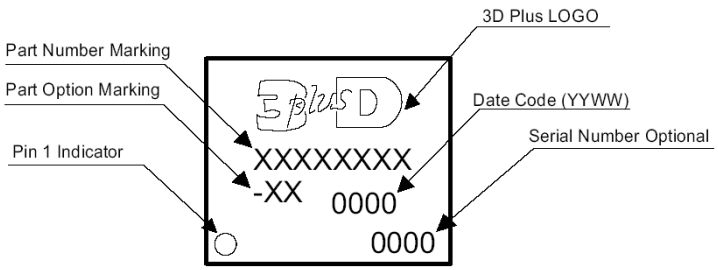
Parameter	Symbol	Max	Unit
Differential Output Voltage(Driver)	V_{OD1}	450	mV
Offset Voltage(Driver)	V_{OS}	1.375	V
Differential Input High Threshold(Receiver)	V_{TH}	+100	mV
Differential Input Low Threshold(Receiver)	V_{TL}	-100	mV

3DLV3302VS1619 **X** **X**

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

MODULE MARKING



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