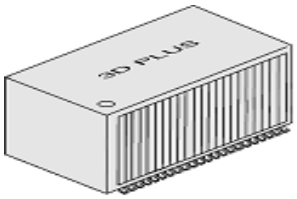
SERDES MODULE

3DLV21721VS2622

21-Bit Channel LVDS link Serializer



Features

- 20 to 68MHz shift clock support
- Up to 1.428 Gbps throughput
- Very low EMI; 350 mV (typ) swing LVDS
- Low Power Consumption
- Power-down Mode
- Requires no external components
- Rising Clock Edge Trigger
- Compact Size and Low Weight
- Space Qualified Technology
- Radiation Characteristics:

  Total Dose: 50Krad(Si)

  SEL Threshold> 60MeV.cm²/mg
- Available Temperature Range:

  0°C to 70°C

  -40°C to +85°C

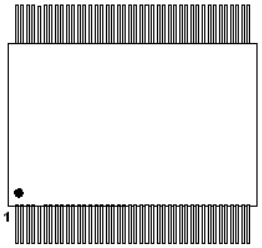
  -55°C to +125°C

General Description

The 3DLV21721VS2622 Serializer with redundancy inside converts 21 bits of CMOS/TTL data into three LVDS data streams. A phase-locked transmit clock is transmitted in parallel with the data streams over a fourth LVDS link. Every clock cycle, 21 bits of input data are sampled and transmitted. Nominal and Redundant LVDS output drivers can be shut off when Power-down is active. It is particularly well suited for use in high reliability, high speed data transmission applications, and easily achieved cross-coupling nominal and redundant system. The 3DLV21721VS2622 is packaged in a 56 pin SOP.

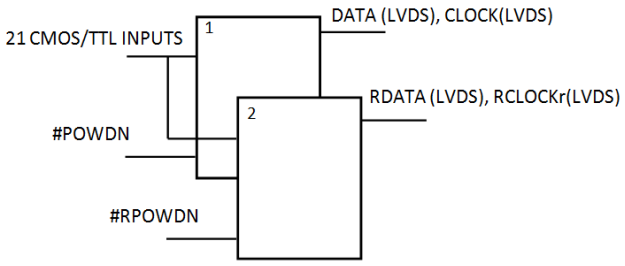
Pin Assignment (Top View)

SOP 56 (Pitch: 0.50 mm)



1	D0	23	D18	45	LVDSVCC
2	D1	24	D19	46	RY1P
3	D2	25	VCC	47	RY1M
4	D3	26	D20	48	GND
5	VCC	27	VCC	49	Y1P
6	D4	28	CLKIN	50	Y1M
7	D5	29	#RPOWDN	51	GND
8	D6	30	#POWDN	52	RY0P
9	D7	31	PLLVCC	53	RY0M
10	GND	32	PLLVCC	54	GND
11	D8	33	CLKOUTP	55	Y0P
12	D9	34	CLKOUTM	56	Y0M
13	D10	35	GND		
14	D11	36	RCLKOUTP		
15	VCC	37	RCLKOUTM		
16	D12	38	GND		
17	D13	39	Y2P		
18	D14	40	Y2M		
19	D15	41	GND		
20	GND	42	RY2P		
21	D16	43	RY2M		
22	D17	44	LVDSVCC		

Functional Block Diagram



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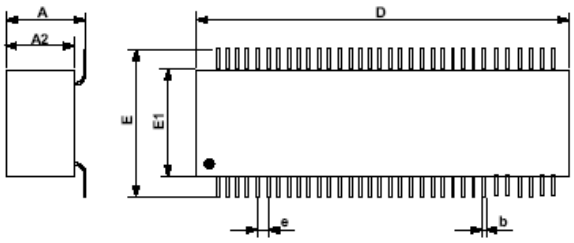
Mechanical Drawing



	Min	Max
A	6.80 Max.	
A2	5.40 Max.	
D	16.00	
E	15.60	16.00
E1	13.10	13.30
b	0.20	
e	0.50	
Dimensions (mm)		

Max. weight: 3.8g

DC OPERATING CONDITIONS

Parameter	Symbol	Operating Mode	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		3.0	3.3	3.6	V
Input High Voltage	V_{IH}		2.0		V_{CC}	V
Input Low Voltage	V_{IL}		0		0.8	V
Differential Output Voltage	V_{OD}		247		454	mV
Common-mode Output Voltage	V_{OC}		1.125		1.375	V
Average Quiescent Current	$I_{CC\ (AVG)}$	*Active mode, R_L=100Ω (1 component)*		85	110	mA
		Disable mode, all inputs at GND			560	µA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Voltage on V_{CC} supply relative to V_{SS}	V_{CC}	-0.5 to 4	V
Storage Temperature	T_{STG}	-65 to +150	°C
Power Dissipation	P_D	2	W
Junction Temperature	T_J	150	°C

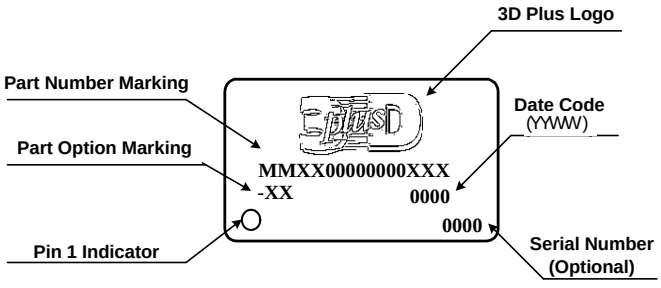
Note :
Permanent device damage may occur if "ABSOLUTE MAXIMUM RATINGS" are exceeded.
Functional operation should be restricted to recommended operating condition.
Exposure to higher than recommended voltage for extended periods of time could affect device reliability

3DLV21721VS2622 - 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

Module Marking



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