

LVDS ESD Performance

Table 1: Cross Reference of Applicable Products

Product Name:	Manufacturer Part Number	SMD #	Device Type	Internal PIC
3.3V Quad Driver	UT54LVDS031LV/E	5962-98651	02, 03, 04, 05	WD03, WD07, WD28, WD30
3.3V Quad Receiver	UT54LVDS032LV/E	5962-98652	02, 03, 04, 05	WD04, WD08, WD29, WD31
3.3V Quad Receiver with Termination Resistor	UT54LVDS032LVT	5962-04201	01, 02	WD06, WD10
3.3V Bus Quad Driver	UT54LVDM031LV	5962-06201	01	WD21
3.3V Dual Driver and Receiver	UT54LVDM055LV	5962-06202	01	WD22
5.0V Quad Driver	UT54LVDS031	5962-95833	02	JR05, JR08
5.0V Quad Receiver	UT54LVDS032	5962-95834	02	JR06, JR09
5.0V Quad Driver with Cold Spare	UT54LVDS031	5962-95833	03	JR10
5.0V Quad Receiver with Cold Spare	UT54LVDS032	5962-95834	03	JR11
3.3V Quad Bus LVDS Crosspoint Switch	UT54LVDM228	5962-01537	01	WD15, WD16
3.3V Octal Bus LVDS Repeater	UT54LVDM328	5962-01536	01	WD17, WD18
3.3V Serializer	UT54LVDS217	5962-01534	01, 02	WD11, WD13
3.3V Deserializer	UT54LVDS218	5962-01535	01, 02	WD12, WD14

1.0 Overview

One of the primary concerns surrounding devices that provide off board interface capabilities is ESD sensitivity. Given these concerns CAES Colorado Springs has identified the need to specify ESD performance on a pin-by-pin basis. The following Application Note summarizes the ESD performance on the various pin types available for each device in the LVDS Family.

2.0 ESD Performance Cross Reference

Table 2 shows CAES LVDS devices and their respective ESD performance. All CAES Colorado Springs LVDS devices have ESD tests performed as part of Qualification. The ESD tests determine the classification of each device based on the worst performing pin on the part.

LVDS ESD Performance

Table 2. Summary of ESD Performance for CAES LVDS Devices

Part Number	Model	SMD	Device Types	LVDS Inputs	LVDS Outputs	CMOS Inputs	CMOS Outputs	PWR GND	Class
UT54LVDS031 ³	HBM	5962-95833	03	N/A	250V	6000V	N/A	1000V	1A
UT54LVDS032 ³	HBM	5962-95834	03	250V	N/A	1500V	1500V	1500V	1C
UT54LVDS031	HBM	5962-95833	02	N/A	500V	6000V	N/A	1000V	1B
UT54LVDS032	HBM	5962-95834	02	1500V	N/A	1500V	1500V	1500V	1C
UT54LVDS031LV/E	HBM	5962-98651	02, 03, 04, 05	N/A	>8000V	1100V	N/A	>8000V	1C
UT54LVDS032LV/E	HBM	5962-98652	02, 03, 04, 05	>8000V	N/A	1200V	2750V	>8000V	1C
UT54LVDS228	HBM	5962-01537	01	1200V	1200V	1200V	1200V	1200V	1C
UT54LVDM328	HBM	5962-01536	01	1200V	1200V	1200V	1200V	1200V	1C
UT54LVDM031	HBM	5962-06201	01	N/A	>8000V	1200V	N/A	>8000V	1C
UT54LVDM055	HBM	5962-06202	01	>8000V	>8000V	1200V	1200V	>8000V	1C
UT54LVDS217	HBM	5962-01534	01, 02	N/A	750V	750V	750V	750V	1B
UT54LVDS218	HBM	5962-01535	01, 02	1000V	N/A	1000V	1000V	1000V	1C

Notes

- 1) HBM =Human Body Model
- 2) ESD levels based on the worst case pin. LVDS pins may be higher.
- 3) Machine Model testing confirmed these devices are rated Class 0, these devices are not recommended for new designs.

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