

**PRODUCT CHANGE NOTICE**

1. TITLE ALL CAES LVDS PRODUCTS – HBM ESD RATINGS ADDED TO DATA SHEET (DS) AND SMD DOCUMENTS		2. DOCUMENT NUMBER SPO-2022-PCN-002			
		3. DATE (Year, Month, Date) 2022 AUGUST 01			
4. MANUFACTURER NAME AND ADDRESS CAES 4350 CENTENNIAL BOULEVARD COLORADO SPRINGS, COLORADO 80907-3486		5. MANUFACTURER POINT OF CONTACT NAME Bruce Massey			
		6. MANUFACTURER POINT OF CONTACT TELEPHONE 719-594-8466			
		7. MANUFACTURER POINT OF CONTACT EMAIL Bruce.Massey@CAES.com			
8. CAGE CODE <b>65342</b>	9. EFFECTIVE DATE 2022 JUNE 02	10. PRODUCT IDENTIFICATION CODE See Table 2, SHEET 2	11. BASE PART See Table 2, SHEET 2		
12. BLANK		13. SMD NUMBER See Table 2, SHEET 2	14. DEVICE TYPE DESIGNATOR See Table 2, SHEET 2		
		15. RHA LEVELS ALL (R, F, G, H)	16. QML LEVEL Q, V		
		17. NON QML LEVEL Prototype, HiRel	18. GIDEP GIDEP GB4-C-22-0005		
19. PRODUCT CHANGE CAES LVDS product Data Sheets (DSs) and Standard Microcircuit Drawings (SMDs) have been updated to include human body model (HBM) electrostatic discharge (ESD) voltage ratings in the Absolute Maximum Ratings (AMR) sections of these product specifications. Some HBM ESD voltage ratings values have been corrected, based on a review of the test data. These ratings have been standardized, and now reflect worst-case device pin voltage.  The related LVDS HBM ESD Application Note (AN) webpage link is provided here:  AN-LVDS-001-02 LVDS Standard Products HBM ESD Ratings APPLICATION NOTE - RELEASED 08/05/08 <a href="https://caes.com/sites/default/files/documents/App-Note-LVDS-HBM-ESD-Ratings.pdf">https://caes.com/sites/default/files/documents/App-Note-LVDS-HBM-ESD-Ratings.pdf</a>  Summary Table 2 from this AN has been included in this PCN document for reference. See SHEET 2, below.  The CAES LVDS product DS and DLA SMD document website links are included below in SHEET 3.  For applicable CAES part numbers and DLA SMD numbers, see Table 1, SHEET 4-6, below.					
20. DISPOSITIONARY RECOMMENDATION:		CHECK & USE AS IS <input type="checkbox"/>	CONTACT MANUFACTURER <input type="checkbox"/>	REMOVE & REPLACE <input type="checkbox"/>	CORRECT & USE AS SPECIFIED <input checked="" type="checkbox"/>

**Reference:****AN-LVDS-001-02 LVDS Standard Products HBM ESD Ratings****APPLICATION NOTE RELEASED 08/05/08**<https://caes.com/sites/default/files/documents/App-Note-LVDS-HBM-ESD-Ratings.pdf>**AN-LVDS-001-02 Table 2. Summary of HBM ESD Ratings for CAES LVDS Devices**

Product Name	CAES Part #	SMD #	Device Type	PIC #	ESD Rating (V)	ESD Class
3.3V Quad TX Driver	UT54LVDS031LV/E	5962-98651	02, 04	WD03, WD28	1100	1C
3.3V Quad TX Driver	UT54LVDS031LV/E	5962-98651	03, 05	WD07, WD30	1000	1C
3.3V Quad RX Receiver	UT54LVDS032LV/E	5962-98652	02, 04	WD04, WD29	1200	1C
3.3V Quad RX Receiver	UT54LVDS032LV/E	5962-98652	03, 05	WD08, WD31	1000	1C
3.3V Quad RX Receiver w/ R <sub>TERM</sub>	UT54LVDS032LVT	5962-04201	01	WD06	1200	1C
3.3V Quad RX Receiver w/ R <sub>TERM</sub>	UT54LVDS032LVT	5962-04201	02	WD10	1000	1C
3.3V Quad Bus-LVDS TX Driver	UT54LVDM031LV	5962-06201	01	WD21	1000	1C
3.3V Dual Bus-LVDS RX Receiver & TX Driver	UT54LVDM055LV	5962-06202	01	WD22	1000	1C
3.3V Quad Bus-LVDS 2x2 Crosspoint Switch	UT54LVDM228	5962-01537	01	WD15, WD16	1250	1C
3.3V Octal Bus-LVDS Repeater	UT54LVDM328	5962-01536	01	WD17, WD18	1250	1C
3.3V Octal LVDS Repeater	UT54LVDS328	5962-20219	01	WD45	1200	1C
2.5V 1.25 Gbps LVDS Repeater	UT54LVDS454	5962-21211	01, 02	WQ06	1000	1C
3.3V 21:3 LVDS Serializer	UT54LVDS217	5962-01534	01, 02	WD11, WD13	750	1B
3.3V 3:21 LVDS Deserializer	UT54LVDS218	5962-01535	01, 02	WD12, WD14	1000	1C
5.0V Quad TX Driver †	UT54LVDS031	5962-95833	02	JR05, JR08	500	1B
5.0V Quad RX Receiver †	UT54LVDS032	5962-95834	02	JR06, JR09	900	1B
5.0V Quad TX Driver w/ Cold Spare †	UT54LVDS031	5962-95833	03	JR10	250	1A
5.0V Quad RX Receiver w/ Cold Spare †	UT54LVDS032	5962-95834	03	JR11	250	1A

**Notes**

1) † Not recommended for new designs.

Applicable Data Sheets (DS) – All CAES LVDS Products, CAES LVDS product DS webpage links here:

<https://caes.com/products/radiation-hardened-solutions-high-reliability-components/interconnect/lvds>

<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS031LVE.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS032LVE.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS032LVT.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDM031LV.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDM055LV.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDM228.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDM328.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS328.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS454.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS217.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS218.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS031.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS032.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS031.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS032.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS031.pdf>  
<https://caes.com/sites/default/files/documents/Datasheet-UT54LVDS032.pdf>

Applicable SMDs – All CAES LVDS Products, CAES LVDS product DLA SMD webpage links here:

<https://landandmaritimeapps.dla.mil/programs/smcr/default.aspx>

<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/98651.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/98652.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/04201.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/06201.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/06202.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/01537.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/01536.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/20219.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/21211.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/01534.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/01535.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/95833.pdf>  
<https://landandmaritimeapps.dla.mil/Downloads/MilSpec/Smd/95834.pdf>

SMD updates are complete. Now in CAES internal review and approval cycle with ECD of June, 2022.

Table 1. Affected Part Numbers Under This PCN

Description	SMD Number	CAES Part Number	CAES PIC Number
3.3V Quad TX Driver, UT54LVDS031LVE	5962H9865102Q9A	UT54LVDS031LV_QDIE	WD03, WD07, WD28, WD30
	5962H9865102QYA	UT54LVDS031LVUCA	
	5962H9865102QYC	UT54LVDS031LVUCC	
	5962H9865102V9A	UT54LVDS031LV_VDIE	
	5962H9865102VYA	UT54LVDS031LVUCA	
	5962H9865102VYC	UT54LVDS031LVUCC	
	5962R9865103Q9A	UT54LVDS031LV_QDIE	
	5962R9865103QYA	UT54LVDS031LVUCA	
	5962R9865103QYC	UT54LVDS031LVUCC	
	5962R9865103V9A	UT54LVDS031LV_VDIE	
	5962R9865103VYA	UT54LVDS031LVUCA	
	5962R9865103VYC	UT54LVDS031LVUCC	
	5962H9865104Q9A	UT54LVDS031LVE_QDIE	
	5962H9865104QYA	UT54LVDS031LVEUCA	
	5962H9865104QYC	UT54LVDS031LVEUCC	
	5962H9865104V9A	UT54LVDS031LVE_VDIE	
	5962H9865104VYA	UT54LVDS031LVEUCA	
	5962H9865104VYC	UT54LVDS031LVEUCC	
	5962R9865105Q9A	UT54LVDS031LVE_QDIE	
	5962R9865105QYA	UT54LVDS031LVEUCA	
5962R9865105QYC	UT54LVDS031LVEUCC		
5962R9865105V9A	UT54LVDS031LVE_VDIE		
5962R9865105VYA	UT54LVDS031LVEUCA		
5962R9865105VYC	UT54LVDS031LVEUCC		
3.3V Quad RX Receiver, UT54LVDS032LVE	5962H9865202Q9A	UT54LVDS032LV_QDIE	WD04, WD08, WD29, WD31
	5962H9865202QYA	UT54LVDS032LVUCA	
	5962H9865202QYC	UT54LVDS032LVUCC	
	5962H9865202V9A	UT54LVDS032LV_VDIE	
	5962H9865202VYA	UT54LVDS032LVUCA	
	5962H9865202VYC	UT54LVDS032LVUCC	
	5962R9865203Q9A	UT54LVDS032LV_QDIE	
	5962R9865203QYA	UT54LVDS032LVUCA	
	5962R9865203QYC	UT54LVDS032LVUCC	
	5962R9865203V9A	UT54LVDS032LV_VDIE	
	5962R9865203VYA	UT54LVDS032LVUCA	
	5962R9865203VYC	UT54LVDS032LVUCC	
	5962H9865204Q9A	UT54LVDS032LVE_QDIE	
	5962H9865204QYA	UT54LVDS032LVEUCA	
	5962H9865204QYC	UT54LVDS032LVEUCC	
	5962H9865204V9A	UT54LVDS032LVE_VDIE	
	5962H9865204VYA	UT54LVDS032LVEUCA	
	5962H9865204VYC	UT54LVDS032LVEUCC	
	5962R9865205Q9A	UT54LVDS032LVE_QDIE	
	5962R9865205QYA	UT54LVDS032LVEUCA	
5962R9865205QYC	UT54LVDS032LVEUCC		
5962R9865205V9A	UT54LVDS032LVE_VDIE		
5962R9865205VYA	UT54LVDS032LVEUCA		
5962R9865205VYC	UT54LVDS032LVEUCC		
3.3v Quad RX Receiver w/	5962H0420101QYA	UT54LVDS032LVTUCA	WD06, WD10

R <sub>TERM</sub>	5962H0420101QYC	UT54LVDS032LVTUCC	
	5962H0420101VYA	UT54LVDS032LVTUCA	
	5962H0420101VYC	UT54LVDS032LVTUCC	
	5962H0420101Q9A	UT54LVDS032LVTQ9A	
	5962H0420101V9A	UT54LVDS032LVTV9A	
	5962R0420102QYA	UT54LVDS032LVTUCA	
	5962R0420102QYC	UT54LVDS032LVTUCC	
	5962R0420102VYA	UT54LVDS032LVTUCA	
	5962R0420102VYC	UT54LVDS032LVTUCC	
	5962R0420102Q9A	UT54LVDS032LVTQ9A	
	5962R0420102V9A	UT54LVDS032LVTV9A	
	3.3V Quad Bus-LVDS TX Driver, UT54LVDM031LV	5962F0620101QXA	
5962F0620101QXC		UT54LVDM031LVUCC	
5962F0620101VXA		UT54LVDM031LVUCA	
5962F0620101VXC		UT54LVDM031LVUCC	
3.3V Dual Bus-LVDS RX Receiver & TX Driver, UT54LVDM055LV	5962F0620201QXA	UT54LVDM055LVUCA	WD22
	5962F0620201QXC	UT54LVDM055LVUCC	
	5962F0620201VXA	UT54LVDM055LVUCA	
	5962F0620201VXC	UT54LVDM055LVUCC	
	5962F0620201Q9A	UT54LVDM055LV-Q-DIE	
	5962F0620201V9A	UT54LVDM055LV-V-DIE	
3.3V Quad Bus-LVDS 2x2 Crosspoint Switch, UT54LVDM228	5962H0153701QXA	UT54LVDM228UPA	WD15, WD16
	5962H0153701QXC	UT54LVDM228UPC	
	5962H0153701VXA	UT54LVDM228UPA	
	5962H0153701VXC	UT54LVDM228UPC	
3.3V Octal Bus-LVDS Repeater, UT54LVDM328	5962H0153601QYA	UT54LVDM328UCA	WD17, WD18
	5962H0153601QYC	UT54LVDM328UCC	
	5962H0153601VYA	UT54LVDM328UCA	
	5962H0153601VYC	UT54LVDM328UCC	
	5962R0153601QYA	UT54LVDM328UCA	
	5962R0153601QYC	UT54LVDM328UCC	
	5962R0153601VYA	UT54LVDM328UCA	
	5962R0153601VYC	UT54LVDM328UCC	
3.3V Octal LVDS Repeater, UT54LVDS328	5962H2021901QYA	UT54LVDS328UQA	WD45
	5962H2021901QYC	UT54LVDS328UQC	
	5962H2021901VYA	UT54LVDS328UVA	
	5962H2021901VYC	UT54LVDS328UVC	
2.5V 1.25 Gbps LVDS Repeater, UT54LVDS454	5962R2121101QXC	UT54LVDS454-ZQC	WQ06
	5962R2121101QYF	UT54LVDS454-SQF	
	5962R2121102QXC	UT54LVDS454-ZZC	
	5962R2121102QYF	UT54LVDS454-SZF	
3.3V 21:3 LVDS Serializer (SER), UT54LVDS217	5962R0153401QXA	UT54LVDS217UCA	WD11, WD13
	5962R0153401QXC	UT54LVDS217UCC	
	5962R0153401VXA	UT54LVDS217UCA	
	5962R0153401VXC	UT54LVDS217UCC	
	5962R0153401Q9A	UT54LVDS217-QDIE	
	5962R0153401V9A	UT54LVDS217-VDIE	
	5962F0153402QXA	UT54LVDS217UCA	
	5962F0153402QXC	UT54LVDS217UCC	
	5962F0153402VXA	UT54LVDS217UCA	
	5962F0153402VXC	UT54LVDS217UCC	
	5962F0153402Q9A	UT54LVDS217-QDIE	
	5962F0153402V9A	UT54LVDS217-VDIE	
	5962H0153402QXA	UT54LVDS217UCA	
	5962H0153402QXC	UT54LVDS217UCC	

	5962H0153402VXA	UT54LVDS217UCA	
	5962H0153402VXC	UT54LVDS217UCC	
	5962H0153402Q9A	UT54LVDS217-QDIE	
	5962H0153402V9A	UT54LVDS217-VDIE	
3.3V 3:21 LVDS Deserializer (DES), UT54LVDS218	5962H0153501QXA	UT54LVDS218UCA	WD12, WD14
	5962H0153501QXC	UT54LVDS218UCC	
	5962H0153501VXA	UT54LVDS218UCA	
	5962H0153501VXC	UT54LVDS218UCC	
	5962H0153501Q9A	UT54LVDS218-QDIE	
	5962H0153501V9A	UT54LVDS218-VDIE	
	5962H0153502QXA	UT54LVDS218UCA	
	5962H0153502QXC	UT54LVDS218UCC	
	5962H0153502VXA	UT54LVDS218UCA	
	5962H0153502VXC	UT54LVDS218UCC	
	5962H0153502Q9A	UT54LVDS218-QDIE	
	5962H0153502V9A	UT54LVDS218-VDIE	
	5.0V Quad TX Driver †, UT54LVDS031, w/ Cold Spare † UT54LVDS031	5962H9583302QXA	
5962H9583302QXC		UT54LVDS031UCC	
5962H9583302VXA		UT54LVDS031UCA	
5962H9583302VXC		UT54LVDS031UCC	
5962H9583302V9A		UT54LVDS031-VDIE	
5962H9583302Q9A		UT54LVDS031-QDIE	
5962F9583303QXA		UT54LVDS031UCA	
5962F9583303QXC		UT54LVDS031UCC	
5962F9583303VXA		UT54LVDS031UCA	
5962F9583303VXC		UT54LVDS031UCC	
5962F9583303V9A		UT54LVDS031-VDIE	
5962F9583303Q9A		UT54LVDS031-QDIE	
5.0V Quad RX Receiver †, UT54LVDS032, w/ Cold Spare † UT54LVDS032		5962H9583402Q9A	UT54LVDS032-QDIE
	5962H9583402QXA	UT54LVDS032UCA	
	5962H9583402QXC	UT54LVDS032UCC	
	5962H9583402V9A	UT54LVDS032-VDIE	
	5962H9583402VXA	UT54LVDS032UCA	
	5962H9583402VXC	UT54LVDS032UCC	
	5962F9583403Q9A	UT54LVDS032-QDIE	
	5962F9583403QXA	UT54LVDS032UCA	
	5962F9583403QXC	UT54LVDS032UCC	
	5962F9583403V9A	UT54LVDS032-VDIE	
	5962F9583403VXA	UT54LVDS032UCA	
	5962F9583403VXC	UT54LVDS032UCC	

Notes

1) † Not recommended for new designs.