

PROBLEM ADVISORY

1. TITLE Microcircuit, Digital, Radiation Hardened, Low Voltage CMOS, Minimum Skew One-to-Eight clock Driver, LVTTTL Compatible Inputs and Outputs, Monolithic Silicon			2. DOCUMENT NUMBER SPO-2013-PA-0001		
			3. DATE (Year, Month, Day) 2013, FEBRUARY, 07		
4. MANUFACTURER NAME AND ADDRESS CAES 4350 CENTENNIAL BOULEVARD COLORADO SPRINGS, COLORADO 80907-3486			5. MANUFACTURER POINT OF CONTACT NAME Tim Meade		
			6. MANUFACTURER POINT OF CONTACT TELEPHONE (719) 594-8048		
			7. MANUFACTURER POINT OF CONTACT EMAIL tim.l.meade@cobhamaes.com		
8. CAGE CODE 65342	9. LDC START ALL	10. LDC END ALL	11. PRODUCT IDENTIFICATION CODE WD33	12. BASE PART UT54ALVC2525	
13. BLANK			14. SMD NUMBER 5962-06233	15. DEVICE TYPE DESIGNATOR 02	
			15. RHA LEVELS R	16. QML LEVEL Q & V	
			17. NON QML LEVEL N/A	18. BLANK	
20. PROBLEM DESCRIPTION / DISCUSSION / EFFECT CAES has learned that the dose rate defined for the total ionizing dose (TID) hardness limit of device type 02 in SMD #5962R06233 was incorrect. Under the standard 50-300 rads(Si)/sec dose rate, Device Type 02 passes 75k-85k rad(Si) TID. Device type 02 reaches the specified 100 krad(Si) limit under an effective irradiation dose rate of 1 rad(Si)/sec as described in the TID test method 1019, paragraph 3.11.2 in MIL-STD-883. <i>Reference the CURRENT SMD Description:</i> <u>1.5 Radiation features</u> Maximum total dose available (Dose rate = 50 – 300 rad(Si)/s): Device type 01..... ≥ 1 Mrad Device type 02..... ≥ 100 kRad					
21. ACTION TAKEN / PLANNED CAES is updating the SMD total dose specification for device types 01 and 02 to properly reflect the dose rates under which they achieve their TID tolerance. <i>Reference the CORRECTED SMD Description:</i> ----- <u>1.5 Radiation features</u> Maximum total dose available Device type 01 (Dose rate = 50 – 300 rad(Si)/s)..... ≥ 1 Mrad Device type 02 (Effective dose rate = 1 rad(Si)/s)..... ≥ 100 kad <u>3/</u> Notes: <u>3/</u> Device is irradiated at a dose rate = 50 – 300 rad(Si)/s in accordance with MIL-STD-883, method 1019, condition A, and is guaranteed to a maximum dose rate specified. The effective dose rate after extended room temperature anneal = 1 rad(Si)/s per MIL-STD-883, method 1019, condition A, section 3.11.2. The total dose specification for these devices only applies to a low dose rate environment. ----- VENDOR RECOMMENDATIONS: CAES recommends that user's check their mission requirements to ensure the expected dose rate is less than 1 rad(Si)/sec. In the event that a higher dose rate capability is required for the application, CAES will support an exchange program with the equivalent device type 01 (5962R0623301***) product. All replacements must be exchanged before June 30, 2013. After June 30, 2013, CAES will no longer exchange devices per this GIDEP.					
22. DISPOSITIONARY RECOMMENDATION:			USE AS IS <input type="checkbox"/>	CONTACT MANUFACTURER <input type="checkbox"/>	REMOVE & REPLACE <input type="checkbox"/>
					CHECK & <input checked="" type="checkbox"/> USE AS IS
23. ADEPT REPRESENTATIVE Timothy L. Meade		24. SIGNATURE 			25. DATE 2013, February, 07