

PROBLEM ADVISORY

1. TITLE GROUP D SEAM SEAL FAILURE OF MICROCIRCUIT, MEMORY, DIGITAL, CMOS, RADIATION-HARDENED, DUAL VOLTAGE SRAM, MULTICHIP MODULE			2. DOCUMENT NUMBER SPO-2020-PA-0006D		
			3. DATE (Year, Month, Date) 2022, Aug, 25		
4. MANUFACTURER NAME AND ADDRESS CAES 4350 CENTENNIAL BOULEVARD COLORADO SPRINGS, COLORADO 80907-3486			5. MANUFACTURER POINT OF CONTACT NAME Peter Nelson		
			6. MANUFACTURER POINT OF CONTACT TELEPHONE 719-594-8238		
			7. MANUFACTURER POINT OF CONTACT EMAIL Peter.b.nelson@cobhamaes.com		
8. CAGE CODE 65342	9. LDC START 1849	10. LDC END 1948	11. PRODUCT IDENTIFICATION CODE QS09 thru QS17	12. BASE PART UT8ERxM32M/S UT8RxM39	
13. BLANK			14. SMD NUMBER 10202 thru 10207	15. DEVICE TYPE DESIGNATOR All	
			16. RHA LEVELS All	17. QML LEVEL All	
			18. NON QML LEVEL All	19. GIDEP NUMBER GB4-P-22-01	
20. PROBLEM DESCRIPTION / DISCUSSION / EFFECT The SRAM part numbers listed in Table 1 which have an 1849-1948 date code may not remain hermetic post Group D3 stressing (thermal shock, thermal cycling & moisture exposure). All parts initially passed two Fine/Gross leak screens during production flow; however Group D3 temperature stressing aggravated the corner region of the welds and induced seal failures on some samples from the affected date codes. Although all parts delivered to customers were hermetic, there is a risk of having a latent defect on the seals which may exhibit itself as a non hermetic part post stressing. See Table 1 for affected PNs.					
21. ACTION TAKEN / PLANNED SRAM production and shipments are on hold until a corrective action is implemented. Group D testing will be conducted on a lot by lot basis until three consecutive passing lots are completed. It is recommended that customers contact the factory for disposition of delivered parts. Update: Root cause investigation of the seam seal issue has concluded. Results of the investigation was the development of optimized weld profile parameters for the seam seal process which have been utilized on products starting with LDC 2044. Our seal process flow documents were updated to reflect the new weld parameters. A combo leak test has been added to the end of the test flow to perform a last check of the seal prior to shipment. Shipment of SRAM have resumed in accordance with MIL-PRF-38535 requirements.					
22. DISPOSITIONARY RECOMMENDATION:		CHECK & USE AS IS <input type="checkbox"/>	CONTACT MANUFACTURER <input type="checkbox"/>	REMOVE & REPLACE <input type="checkbox"/>	CORRECT & USE AS SPECIFIED <input type="checkbox"/>

Table 1

Affected PN	PIC	Assembly Lot
5962R1020302VXC	QS10	3HJL
5962R1020304QXC	QS10	3HJLC
5962R1020404QXC	QS12	3FHJD, 3FXAE, 3HTRA
5962R1020501VXC	QS13	3FVT, 3HTH, 3JCF
5962R1020601QXC	QS14	3IAA
5962L1020601QXC	QS14	3JCH, 3JCI
5962R1020601VXC	QS14	3HXB
5962L1020601VXC	QS14	3HXBA
5962R1020602QXC	QS14	3EKZA, 3HKB
32-00148-17	QS14	3HKBA
5962R1020702QXC	QS15	3ENOB, 3FHJF, 3FMT, 3FWZ, 3FXA, 3FXABB, 3HTD, 3HTF, 3HTR, 3HTS, RW3ENO
32-00147-1	QS15	3ENOA, 3FXAA
32-00148-24	QS15	3FMTB
32-00147-2	QS15	3FHJA, 3FXAB

Note: If customer finds an assembly lot within the LDC range of boxes 9 and 10 but is not in Table 1, please contact the factory.