

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - SMK DET/FIRE SUPFMEA NO 05-6VF-2254 -2 REV: 01/29/88

ASSEMBLY : FLCA-1,2,3				CRIT. FUNC: 1
P/N RI : JANTXVIN5551				CRIT. HDW: 1
P/N VENDOR:		VEHICLE	102 103 104	
QUANTITY : 3		EFFECTIVITY:	X X X	
: ONE PER/FLCA-1,2,3		PHASE(S):	PL LO X OO CO X LS	

PREPARED BY:		REDUNDANCY SCREEN:	A-	B-	C-
DES <i>J BROWN</i>	J BROWN	APPROVED BY:		APPROVED BY (NASA)	
REL <i>M HOVE</i>	M HOVE	DES <i>R V Brown</i>		SSM <i>R V Brown</i>	
QE <i>J COURSEN</i>	J COURSEN	REL <i>Mohamed El-Hage 1-30-88</i>		REL <i>John P. ...</i>	
		QE <i>[Signature]</i>		QE <i>[Signature]</i>	

ITEM: DIODE, ISOLATION (3 AMP), IN-FLIGHT FIRE SUPPRESSION 'ARM' COMMAND.

FUNCTION: PROVIDES ISOLATION FROM THE PRE-FLIGHT REMOTE COMMAND FOR THE "ARMING" OF THE PYROTECHNIC INITIATOR CONTROLLER (PIC). 81V76A16 CR, 82V76A17 CR, 83V76A18 CR.

FAILURE MODE: OPEN, FAILS TO CONDUCT

CAUSE(S): STRUCTURAL FAILURE, ELECTRICAL STRESS, THERMAL STRESS, PROCESSING ANOMALY

EFFECT(S) ON:

- (A) SUBSYSTEM (B) INTERFACES (C) MISSION (D) CREW/VEHICLE
- (A) LOSS OF ARMING CAPABILITY OF THE PIC IN THE ASSOCIATED AVIONICS BAY.
- (B) ASSOCIATED PIC CANNOT BE FIRED.
- (C,D) POSSIBLE LOSS OF CREW/VEHICLE IN THE CASE OF FIRE. PORTABLE EXTINGUISHERS CANNOT BE USED BECAUSE THE CREW IS CONFINED TO THEIR SEATS DURING LAUNCH AND DEORBIT. SINGLE-STRING EMERGENCY SYSTEM DURING LAUNCH AND DEORBIT.

DISPOSITION & RATIONALE:

- (A) DESIGN (B) TEST (C) INSPECTION (D) FAILURE HISTORY (E) OPERATIONAL USE

- (A-D) DISPOSITION AND RATIONALE  
REFER TO APPENDIX F, ITEM NO. 4 - DIODE
- (B) GROUND TURNAROUND TEST  
PIC CIRCUIT TESTS PERFORMED PRIOR TO EACH FLIGHT
- (E) OPERATIONAL USE  
POWER DOWN AFFECTED AVIONICS EQUIPMENT.