

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - INSTRUMENTATION FKEA NO 05-6R -325000-2 REV:8/16/88

ASSEMBLY : FWD-PCA 1						CRIT. FUNC: 2R
P/N RI : JANTX1N1204RA						CRIT. HDW: 3
P/N VENDOR:		VEHICLE	102	103	104	
QUANTITY : 2		EFFECTIVITY:	X	X	X	
: (TWO)		PHASE(S):	PL X LD X	OO X DO X	LS X	
:						

PREPARED BY:		REUNDANCY SCREEN:	A-PASS	B-FAIL	C-PASS
DES	W S MCKEE	APPROVED BY:	APPROVED BY (NASA):		
REL	R GREGORIAN	DES	SEN <i>[Signature]</i>		
QE	E GUTIERREZ	REL	REL <i>[Signature]</i>		
		QE/MS	QE <i>[Signature]</i>		

EPD&C AB: *[Signature]* 9/8/88
 EPD&C 100: *[Signature]*

ITEM:
 DIODE, 12A RPC/MAIN BUS ISOLATION.

FUNCTION:
 PROVIDES ISOLATION BETWEEN MAIN BUSES A AND B. THESE DIODES ARE LOCATED AT BOTH RPC OUTPUTS, AND ARE WIRE "OR'D" TOGETHER TO PROVIDE REDUNDANT POWER FOR THE PAYLOAD DATA INTERLEAVER (PDI)
 REFERENCE DESIGNATORS: 81V76A22CR40, CR41.

FAILURE MODE:
 SHORT (END TO END)

CAUSE(S):
 STRUCTURAL FAILURE (MECHANICAL STRESS, VIBRATION), CONTAMINATION
 ELECTRICAL STRESS, THERMAL STRESS, PROCESSING ANOMALY.

EFFECT(S) ON:
 (A) SUBSYSTEM (B) INTERFACES (C) MISSION (D) CREW/VEHICLE

(A) LOSS OF MAIN BUS ISOLATION.

(B,C) FIRST FAILURE : NO EFFECT.
 SECOND FAILURE: POSSIBLE LOSS OF MISSION AFTER LOSS OF ASSOCIATED MAIN BUS, CAUSING REDUNDANT RPC TO TRIP, WHICH WILL CAUSE LOSS OF ALL PDI POWER.

(D) NONE

FAILS SCREEN "B" BECAUSE FAILURE MODE IS UNDETECTABLE.

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPDLC - INSTRUMENTATION PMAA NO 08-6R - 125000-2 REV: 8/16/98

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. 2 - DIODE.

(B) GROUND TURNAROUND TEST

VERIFIED DURING PDI POWER REDUNDANCY TEST.

(E) OPERATIONAL USE

NONE