LTR	ZONE	REVISION	DATE	DRAWN TYPE	APPROVAL
A		SH 1, ADDED FLAG NOTE 27. ADDED FLAG NOTE 27 TO ITEM 21 OF THE PARTS LIST. DELETED ITEM 46 OF THE PARTS LIST. SH. 3, ADDED REF. DES. AND BUBBLE ITEM 1.			Z. PALMER

10-17-97 A 110

27 THE MAXIMUM COMPONENT HEIGHT FOR D2 (ITEM 21) IS .260".

26 REMOVE SILKSCREEN FROM PAD BEFORE SOLDERING.

25 PCB MUST BE MOUNTED IN HOUSING WHEN SOLDERING CONNECTORS. INSTALL CONNECTORS FIRST. MOUNT BOARD IN HOUSING. INSTALL CONNECTOR MOUNTING HARDWARE (ITEM 55) AND PCB MOUNTING SCREWS (ITEMS, 56 AND 57) (WITHOUT LOCTITE). PLUG IN MATING CONNECTORS TO J1 AND J2. THEN SOLDER J1, J2, AND J3, TO PCB. AFTER SOLDERING CONNECTORS, REMOVE PCB FROM HOUSING. DISCARD WASHERS, LOCKWASHER, AND NUT FROM ITEM 55.

24 APPLY TAPE (ITEM 59) TO AREAS SHOWN, BEFORE CONFORMAL COATING. DO NOT REMOVE TAPE AFTER COATING. DO NOT APPLY CONFORMAL COATING TO SCREWS.

23 PARK CORP., SUMMERSET, MA.

22 3M CORP. ST. PAUL, MIN.

21 PANDUIT, TINLEY PARK, IL.

20 REVOX RIFA KALMAR, SWEDEN

19 GRAYFOIL MUST BE MOUNTED TO VICORS BEFORE INSTALLING.

18 MOTOROLA, AUSTIN, TX.

17 DO NOT INSTALL R4, R18, R26, R34, R38, D2, R21, R22, R35, D18, AND C79.

16 MAKE JUMPERS JP1-JP12 AND W1, FROM ITEM 48.

15 USE TIE WRAP (ITEM 47), TO SECURE COMPONENT.

14 RNC55J2503BR MAY BE SUBSTITUTED FOR RNC55J2503BS.

13 RNC65J1000BS MAY BE SUBSTITUTED FOR RNC65J1000BR.

12 KREBILL COMPONENT SALES, ARVADA, CO.

11 DO NOT INSTALL R33, R34. INSTALL JUMPERS (ITEM 48) IN PLACE OF R33:

10 STAKE ITEMS C1-C4, C12, C13, C15, C16, C24, C25, C28, C37, C38, C40, C42, C50, C52, C60, C61, C63, C65, C72, C73, AND C82, WITH 3145 PER NHB 5300.4 (3J).

9 DOW CORNING, MIDLAND, MI.

8 ITT CANNON, SANTA ANA, CA.

7 CORNELL DUBILIER, NEW BEDFORD, MA.

6 SPRAGUE ELECTRONICS, MANSFIELD, MA.

5 PHILLIPS COMPONENTS, EL PASO, TX.

4 NEWARK ELECTRONICS, HOUSTON, TX.

3 VICOR, ANDOVER, MA.

2 PERMANENT INK MARK S/N AND REV IN .12 HIGH CHARACTERS WITH 73X WHITE INK PER JSCM-SPEC-M-1, PARA 3.7.8. THE FIRST PRODUCTION RUN WILL BEGIN WITH S/N 1001 PER JSC 8500.3. LOCATE APPROXIMATELY AS SHOWN.

1 INDEPENDENT INK INC, GARDENA, CA.

NOTES:

14. APPLY TAPE (ITEM 59) TO SCREWS, BEFORE CONFORMAL COATING.
13. GRAFOIL (ITEMS 42 AND 49) MUST BE INSTALLED ON VICOR MODULES (ITEMS 25, AND 34-39), BEFORE INSTALLING INTO CIRCUIT BOARD.
12. VICORS MUST BE MARKED WITH PART NO. BEFORE BEING INSTALLED. PERMANENT INK MARK THE PART NO. ON BOTH ENDS OF VICOR MODULES (ITEMS 25, AND 34-39) IN .125" HIGH CHARACTERS WITH MARKING INK (ITEM 6) PER JSC-SPEC-M-1, PARA 3.7.8.
11. VICOR MODULES MUST BE INSTALLED LAST. PCB MUST BE INSTALLED IN HOUSING, AND VICORS MUST BE BOLTED TO HEAT SINK AND TORQUED DOWN BEFORE SOLDERING.
10. AFTER INSTALLING CONNECTORS, ALL COMPONENTS EXCEPT VICOR MODULES AND FILTERS, SHOULD BE INSTALLED. (DO NOT INSTALL VR1, VR2, VR3, VR4, VR5, VR6, FIL1, AND FIL2). AFTER THIS, THE BOARD SHOULD BE TESTED BEFORE INSTALLING VICORS AND FILTERS.
9. REFER TO NEXT ASSEMBLY SEG46114971 FOR QUANTITIES AND LOCATION OF ALL REFERENCED HARDWARE.
8. THIS ASSEMBLY CONTAINS SOME COMPONENTS THAT ARE ESD SENSITIVE. HANDLE PER JSCM 5300.1.
7. THIS ASSEMBLY CONTAINS NO FRACTURE CRITICAL ELEMENTS.
6. CLEANLINESS REQUIREMENTS PER SN-C-0005 GC LEVEL.
5. AFTER PWB ASSEMBLY INTO HOUSING, AND APPLYING TAPE AS SHOWN, APPLY 3140 CONFORMAL COATING TO COMPONENT SIDE OF PRINTED WIRING BOARD, PER NHB 5300.4 (3J). AND, .2 MINIMUM FROM EDGE OF MOUNTING HOLES SHALL BE FREE OF CONFORMAL COAT.
4. TORQUE NO. 6 FASTENERS TO 3-5 IN. LBS. ABOVE RUNNING TORQUE.
3. TORQUE NO. 2 FASTENERS TO 2-3 IN. LBS. ABOVE RUNNING TORQUE.
2. SOLDER PER NAS 5300.4 (3A-2). SOLDER UP TO 860 F AS REQUIRED. CUT LEADS TO .020 INCH ON SIDE OF BOARD WITH VICOR MODULES ONLY.
1. INTERPRET PER JPG 8500.4.

NOTES: UNLESS OTHERWISE SPECIFIED.

-301 PART NUMBER	DESCRIPTION	REFERENCE DESIGNATOR	SPECIFICATION	ITEM
AR	1204	PRIMER		61
AR	2713	THINNER, NAPTHA		60
AR	5419	TAPE	POLYWIDE/SILICONE	59
AR	3140	CONFORMAL COATING		58
REF	NAS620C4L	WASHER		57
REF	NAS1101E04-6	SCREW		56
REF	D20418-14	CONNECTOR MOUNTING		55
REF	SDG46114188-701	CHASSIS		54
1	SDG46114851-701	HEATSINK NUT PLATE		53
REF	NAS1102E06-8	HEATSINK MTG. SCREW		52
				51
1	RNC55H6812FS	RESISTOR, 68.1K, 1/4W	R25	MIL-R-55182 50
4	04308	GRAFOIL, MINIMOD	FIL1, FIL2, VR3, VR4	49
AR	M22759/22-24-9	WIRE	JP1-JP12, W1	48
AR	PLT1M-C76	TIE WRAP		47
				46
				45
				44
5	RNC55H4991FS	RESISTOR, 4.99K, 1/4W	R10, R29-R32	MIL-R-55182 43
4	01777	GRAFOIL, STANDARD	VR1, VR2, VR5, VR6	42
1	DBMZ9H4PNKB7	CONN., HIGH POWER STRAIGHT PLUG	J3	41
2	DDMC24H7SJA197	CONN., HIGH POWER RIGHT ANGLE SOCKET	J1, J2	40
1	VI-2WY-MW	CONVERTER, DC-DC DRIVER, 3.3V, 20A	VR6	39
1	VI-2W1-MV	CONVERTER, DC-DC DRIVER, 12V, 150W	VR5	38
1	MI-J20-MZ	CONVERTER, DC-DC BOOSTER, 5V, 25W	VR4	37
1	MI-J21-MZ	CONVERTER, DC-DC BOOSTER, 12V, 25W	VR3	36
1	MI-B20-MW	CONVERTER, DC-DC BOOSTER, 5V, 100W	VR2	35
1	MI-220-MW	CONVERTER, DC-DC DRIVER, 5V, 100W	VR1	34
1	RNC60J1001BS	RESISTOR, 1K, 1/4W	R28	MIL-R-55182 33
1	RNC60J1003BS	RESISTOR, 100K, 1/4W	R27	MIL-R-55182 32
2	RNC55J2503BS	RESISTOR, 250K, 1/4W	R3, R17	MIL-R-55182 31
2	RNC65J5100BR	RESISTOR, 510, 1/2W	R9, R11	MIL-R-55182 30
1	RNC65J1000BR	RESISTOR, 100, 1/2W	R12	MIL-R-55182 29
12	TF071R0J	RESISTOR, 1, 1/2W	R1, R13-R16, R19, R2, R20 R23, R24, R7, R8	28
2	LCA-110	SWITCH, OPTICAL FET	D1, D3	27
8	05298	INDUCTOR, 200nH	L1-L8	26
2	MI-A22-MU	ATTENUATOR, INPUT	FIL1, FIL2	25
5	251010	FUSE, 10A	F14-F18	24
13	251015A	FUSE, 15A	F1-F13	23
				22
1	JANTX2N2323	SCR., 1.6A, 100V	D2	21
9	1N4006	RECTIFIER, GEN. PURPOSE	D3, D4, D7, D8, D14-D16 D19, D20	20
6	1N9658	DIODE, ZENER 15V	D10-D13, D17, D22	19
5	1N5819	RECTIFIER, SCHOTTKY BARRIER	D1, D5, D6, D9, D21	18
24	PME271Y447M	CAP., Y RATED, 4700pF	C3-C9, C18, C19, C20, C21 C31-C34, C43-C46, C54-C57 C66-C69	17
6	M39006/22-0534	CAP., TANTALUM, 120uF, 25V	C72, C73, C60, C61 C37, C38	MIL-C-39006/22 16
3	CD15FD471J03	CAPACITOR, 470pF, 500V	C42, C65, C82	15
2	M39006/22-0637	CAP., TANTALUM, 43uF, 100V	C16, C4	MIL-C-39006/22 14
6	M39006/22-0640	CAP., TANTALUM, 86uF, 100V	C15, C3, C28, C40, C52, C63	MIL-C-39006/22 13
5	M39006/22-0517	CAP., TANTALUM, 270uF 15V	C12, C13, C24, C25, C50	MIL-C-39006/22 12
2	306AD022	CAPACITOR, 2.2nF, 3.5kV	C1, C2	11
4	C340C105K1R5CA	CAPACITOR, CER., Z5U, 1uF	C75, C76, C77, C78	10
15	CKR06BX104KR	CAPACITOR, CERAMIC .1uF, 100V	C14, C17, C26, C27, C30, C39 C41, C5, C51, C53, C62, C64 C74, C80, C81	9
12	CKR06BX103KS	CAPACITOR, CERAMIC .01uF, 200V	C10, C11, C22, C23 C35, C36, C47, C48, C58, C59, C70, C71	8
AR	3145	ADHESIVE, RTV		7
AR	73X	INK, MARKING	WHITE	6
AR	63/37 025P3REL15	SOLDER		QQ-S-571 5
1	SDG46113587-004	PWB, POWER SUPPLY		4
REF	SIG46113586	SCHEMTIC, POWER SUPPLY		3
				2
-	-301	PWBA, POWER SUPPLY		1

DIMENSIONAL TOLERANCE UNLESS NOTED OTHERWISE

SIGNATURES		DATE
DR	Z. PALMER	6/13/96
CHK	R. BENNETT	7/18/97
DH	J. BILANOVIC	7/21/97
APP	F. BOOKER	8/5/97
QE	W. IWASA	8/5/97
MATL	T. BROWN	7/25/97
STRESS	F. YUNG	7/22/97
AUTH	A. PLAZA	8/5/97

NATIONAL AERONAUTICS & SPACE ADMINISTRATION

PRINTED WIRING ASSEMBLY
POWER SUPPLY
VEG

CODE IDENT NO.	SIZE	DWG NO.	REV
21356	D	SEG46113588	A

SCALE 1/1 EAS PROJECT: J104 1 OF 3

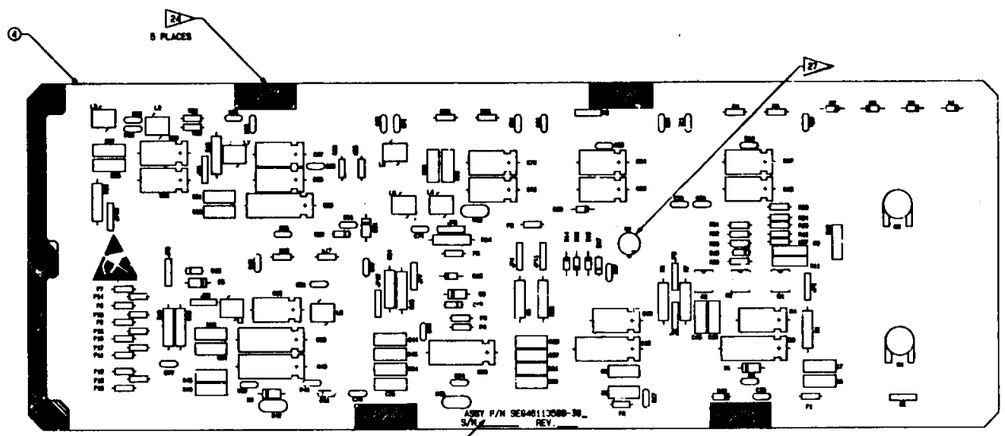
SEG46114971

\PCAD\RELEASE\ASSY

3588A1A HP

410

LTR	ZONE	REVISION	DATE	DRAWN TYPE	APPROVED
A		SEE SHEET 1.			



-301 ASSY (COMPONENT SIDE)

DIMENSIONAL TOLERANCE UNLESS NOTED OTHERWISE	SIGNATURES	DATE
DR	Z. PALMER	6/13/96
ENG	R. BENNETT	7/18/97
CH	J. BILANOVIC	7/21/97
APP	F. BOOKER	8/5/97
SE	M. IWASA	8/5/97
MAT'L	T. BROWN	7/25/97
STRESS	F. YUNG	7/22/97
AUTH	A. PLAZA	8/5/97

NEXT ASSY: SEG46114971

\PCAD\RELEASE\ASSY

3588A2A HP

NATIONAL AERONAUTICS & SPACE ADMINISTRATION

LYNDON B. JOHNSON SPACE CENTER — HOUSTON, TEXAS

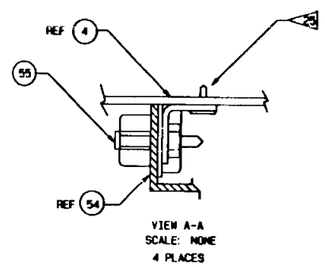
PRINTED WIRING ASSEMBLY
POWER SUPPLY
VEG

CODE IDENT NO.	SIZE	DWG NO.	REV
21356	D	SEG46113588	A

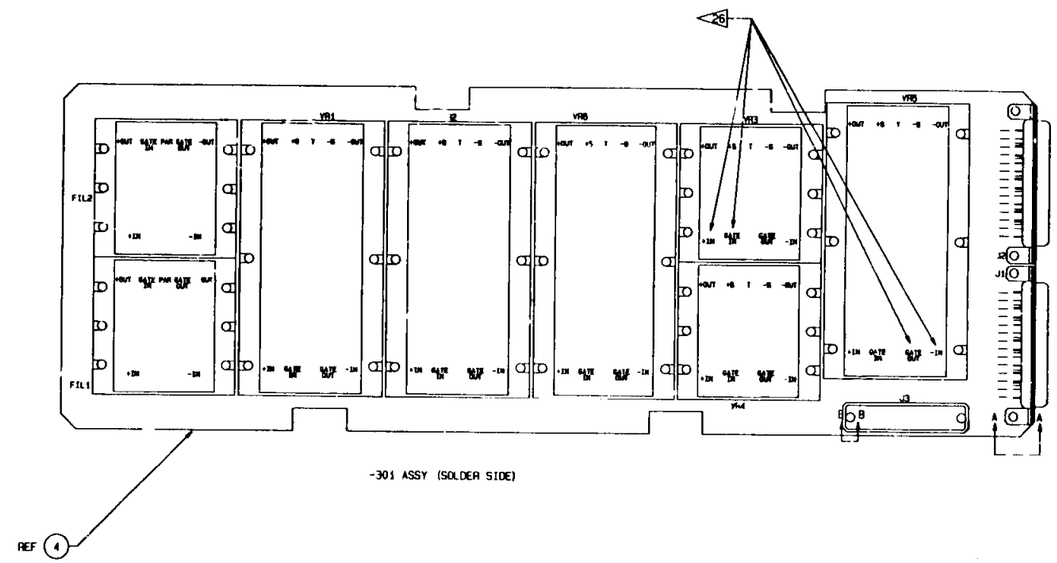
SCALE 1/1 — EAS PROJECT: J104 — 2 OF 3

411

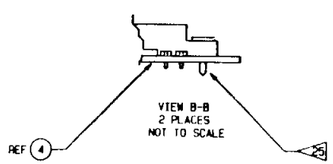
LTR	ZONE	REVISION	DATE	EQUIP TYPE	APPROVED
A		SEE SHEET 1			



VIEW A-A
SCALE: NONE
4 PLACES



-301 ASSY (SOLDER SIDE)



VIEW B-B
2 PLACES
NOT TO SCALE

CALC WT.			
MOD FILE	\PCAD\RELEASE\ASSY		
DRW FILE	7588A3A.HP		
NEXT ASSY	SEG46114971		
EQUIP TYPE			
☒ FLT HDWR			
☐ OTHER (SPECIFY)			
☐ APPLICABLE GSE			

SIGNATURES		DATE
DR	Z. PALMER	6/13/96
ENG	R. BENNETT	7/18/97
CH	J. BILANOVIC	7/21/97
APP	F. BOOKER	8/5/97
JE	M. IMASA	8/5/97
MATL	T. BROWN	7/25/97
STRESS	F. YUNG	7/22/97
AUTH	A. PLAZA	8/15/97

NATIONAL AERONAUTICS & SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER HOUSTON, TEXAS

PRINTED WIRING ASSEMBLY
POWER SUPPLY
VEG

CODE IDENT NO	SIZE	DWG NO	REV
21356	D	SEG46113588	A

SCALE 1/1 LAS PROJECT SHEET 3 OF 3

412

DRAWING CHANGE NOTICE

SHEET 1 OF 1

DRAWING NO.	REV	SEQ.#
SEG46113588	A	01

DRAWING TITLE: PRINTED WIRING ASSEMBLY POWER SUPPLY VEG

PROJECT: B104 HRF WORKSTATION

REASON FOR CHANGE: DESIGN ERROR

ORIGINATOR	L.P-KASHOU	10/29/98	QE M. IWASA	11/12/98
ENG	R. BENNETT	10/28/98	MATL H. KAO	11/10/98
CH	R.A. BULAND	10/26/98	STRESS D. VAN	11/11/98
APP	F. BOOKER	11/15/98		
AUTH			FINAL APP	

ADD FLAG NOTE 28, 29, & 30 AS FOLLOWS:

28 HEATSINK NUT PLATE (ITEM 53) MUST BE INSTALLED BETWEEN VICORS (ITEMS 25, 34 THRU 39) AND PCB BEFORE SOLDERING VICORS.

29 HEATSINK NUT PLATE SDG46114851-702 MAY BE SUBSTITUTED FOR ITEM 53, AS IT IS FUNCTIONALLY EQUIVALENT.

30 RESISTOR RWR80N1ROFR MAY BE SUBSTITUTED FOR ITEM 28.

IN THE PARTS LIST ADD THE FLAG NOTES ACCORDINGLY.

	PART NUMBER	DESCRIPTION	REFERENCE DESIGNATOR	SPECIFICATION	ITEM	(IS) (WAS)
	SDG46114851-701	HEATSINK NUT PLATE		28 29	53	ADD FLAG NOTE
	TF071R0J	RESISTOR 1. 1/2W	R1, R13-R16, R19, R2, R20 R23,R24, R7, R8	30	28	ADD FLAG NOTE

DWG FILE: 46113588a01 PROJECT: B104 HRF WORKSTATION LIBRARY: NON ASC DRAWINGS