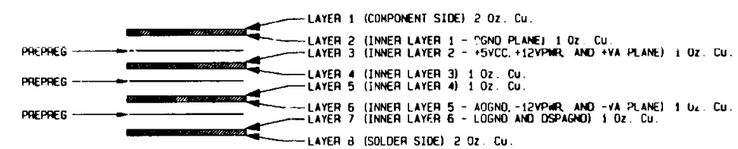
LTR	ZONE	DESCRIPTION OF CHANGE



LAYER STACKING
SCALE = NONE

1. MARK AREA INDICATED WITH THE DATE CODE, TRACEABILITY CODE AND MANUFACTURER'S CODE (FEDERAL SUPPLY CODE FOR MANUFACTURERS) WITH PERMANENT INK (NON CONDUCTIVE) OR IN COPPER ETCH.

FLAG NOTES.

16. SOLDER PLUG .018 DIAMETER HOLES. DOES NOT MEET MINIMUM ANNULAR RING REQUIREMENTS PER MIL-P-55110.
15. ALL REFERENCED SPECIFICATIONS AND STANDARDS SHALL BE OF THE LATEST REVISION LEVEL OR AS SPECIFIED IN THE PROCUREMENT DOCUMENT. IN THE CASE OF CONFLICT, THE PROCUREMENT DOCUMENT SHALL TAKE PRECEDENCE.
14. MIL-P-55110 QUALITY ASSURANCE PROVISIONS APPLY.
13. UNDIMENSIONED HOLES ARE LOCATED ON A .005 GRID.
12. UNLESS OTHERWISE SPECIFIED IN HOLE LEGEND, ALL HOLES ARE PLATED THRU AND SHALL BE THE SPECIFIED DIAMETER AFTER PLATING.
11. THIS DRAWING USED IN CONJUNCTION WITH SCHEMATIC SIG46116242.
10. VENDOR SHALL PROVIDE PRINTED WIRING BOARD COUPONS AS INDICATED.
9. ARTWORK DEPICTED ON THIS DRAWING IS FOR DOCUMENTATION ONLY.
8. ARTWORKS DEPICTED ON THIS DRAWING ARE PHOTO POSITIVES UNLESS OTHERWISE SPECIFIED, AND ARE VIEWED FROM COMPONENT SIDE.
7. SOLDER MASK (GREEN) BOTH SIDES.
6. SILKSCREEN WITH WHITE EPOXY INK PER MIL-I-[illegible], TYPE II (NON CONDUCTIVE).
5. TIN/LEAD PLATE EXTERNAL CONDUCTIVE PATTERNS PER MIL-P-81728.
4. BOARD MATERIAL TO BE EPOXY FIBERGLASS PER MIL-P-13949/4, TYPE GF, EPOXY PREPREG, PER MIL-P-13949/12, TYPE GF. STARTING COPPER WEIGHT SHALL BE 2 OZ. FOR LAYERS 1 AND 8, AND 1 OZ. FOR LAYERS 2 THRU 7. FINISHED LAMINATE MATERIAL THICKNESS SHALL BE .062 + .008 THK.
3. FABRICATE PRINTED WIRING BOARD PER MIL-P-55110 WITH ETCHBACK.
2. ALL DIMENSIONS ARE IN INCHES.
1. INTERPRET PER JPG 8500.4.

NOTES: UNLESS OTHERWISE SPECIFIED

QTY	PART NUMBER	DESCRIPTION	MTRL/REF DES	SPECIFICATION	ITEM
-	SDG46116244-001	PWB,			-

DIMENSIONAL TOLERANCE UNLESS NOTED OTHERWISE: 0 ± 1, .000 ± .010, .00 ± .03, ANGULAR ± .5 DEG.

SURFACE FINISH ON MECHANICALS AND VALUES ACTIVE OTHERWISE ✓

PRACTICE CRITICAL: ☐ YES ☒ NO

MULTI VALUE: SEG46116243

DWG FILE LIBRARY: 624401 HP \PCAD\RELEASE\PCB

☒ PLT HOLES ☐ APPLICABLE SIZE ☐ OTHER (SPECIFY)

SIGNATURES		DATE
DR	Z. PALMER	09/02/97
ENG	[illegible]	2/25/98
CH	[illegible]	2/25/98
APP	[illegible]	[illegible]
DE	[illegible]	3/6/98
MATL	[illegible]	3/6/98
STRESS	[illegible]	3/6/98
AUTH		

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

PRINTED WIRING BOARD
ANALOG
HRF WORKSTATION

PROJECT: J104

SIZE: D | CODE IDENT NO: 21356 | DWG NO: SDG46116244 | REV: NC

SCALE 2 : 1 | ORG. EA5 | SHEET 1 OF 14

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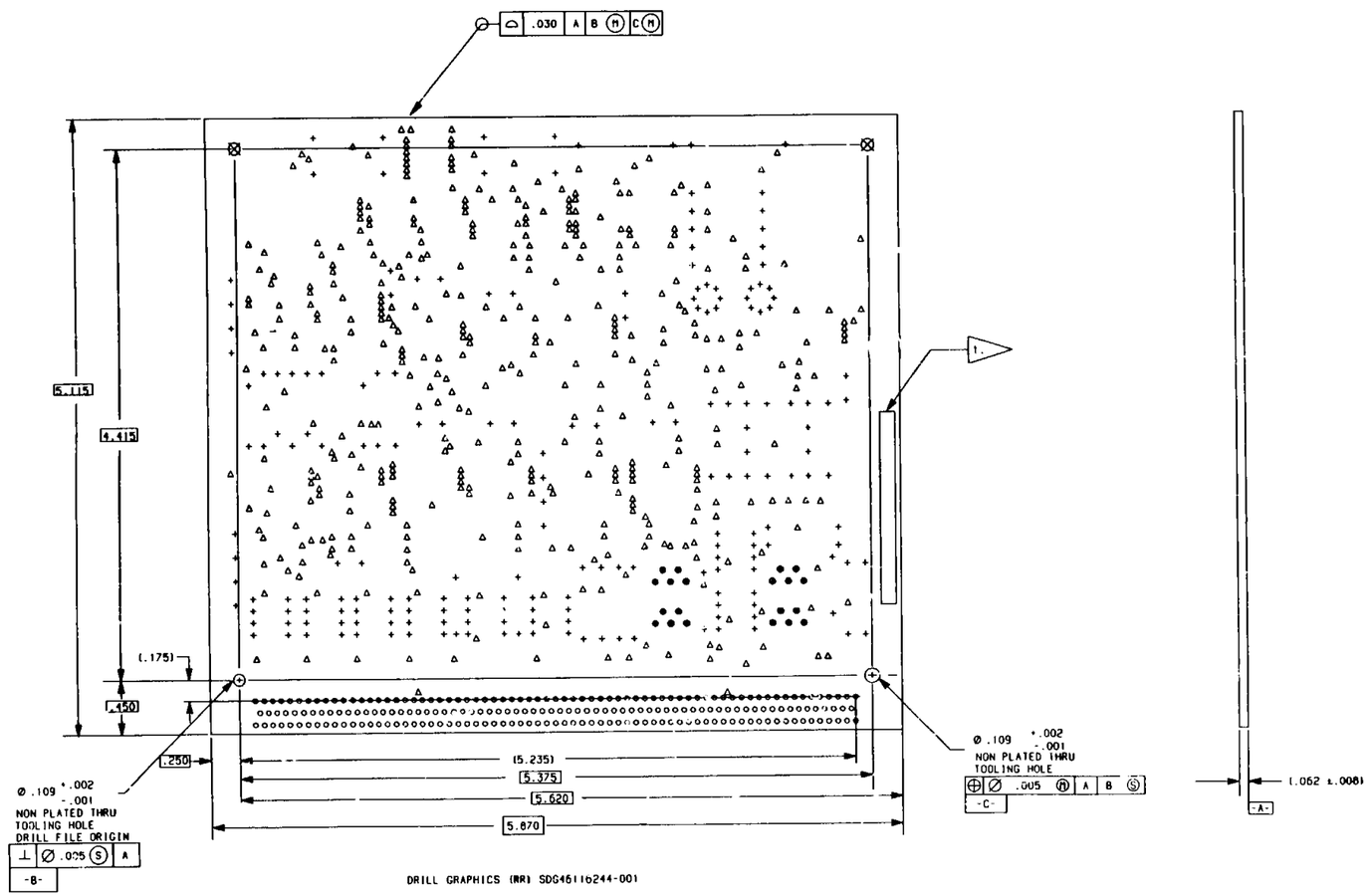
LTR	ZONE	DESCRIPTION OF CHANGE

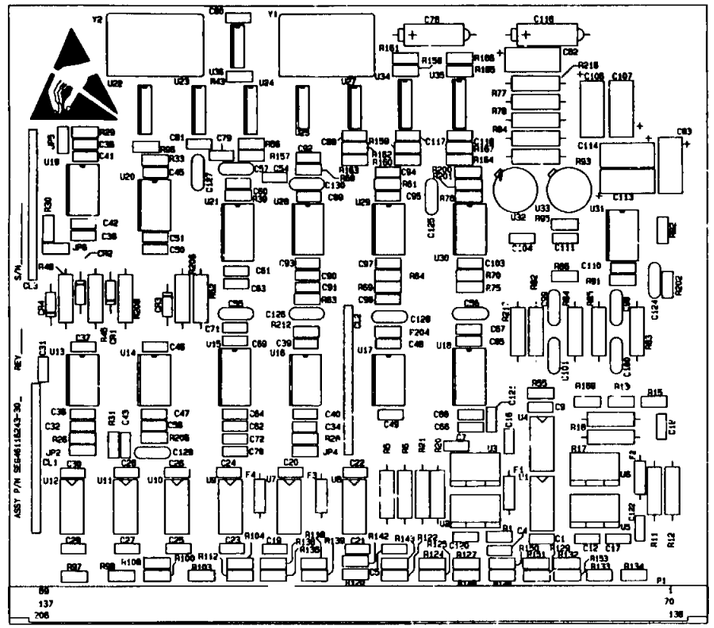


DRILL GRAPHICS (RR) SDG46116244-001

HOLE SIZE SYMBOL	NUMBER OF HOLES	FINISHED_HOLE_DIAMETER ⊕ Ø .005 M A B S C S	
△	413	.018 ±.003	PLATED_THRU_HOLE
○	206	.028 ±.003	PLATED_THRU_HOLE
+	194	.035 ±.004	PLATED_THRU_HOLE
⊕	20	.050 ±.004	PLATED_THRU_HOLE
⊗	2	.109 ±.006	NOT_PLATED_THRU

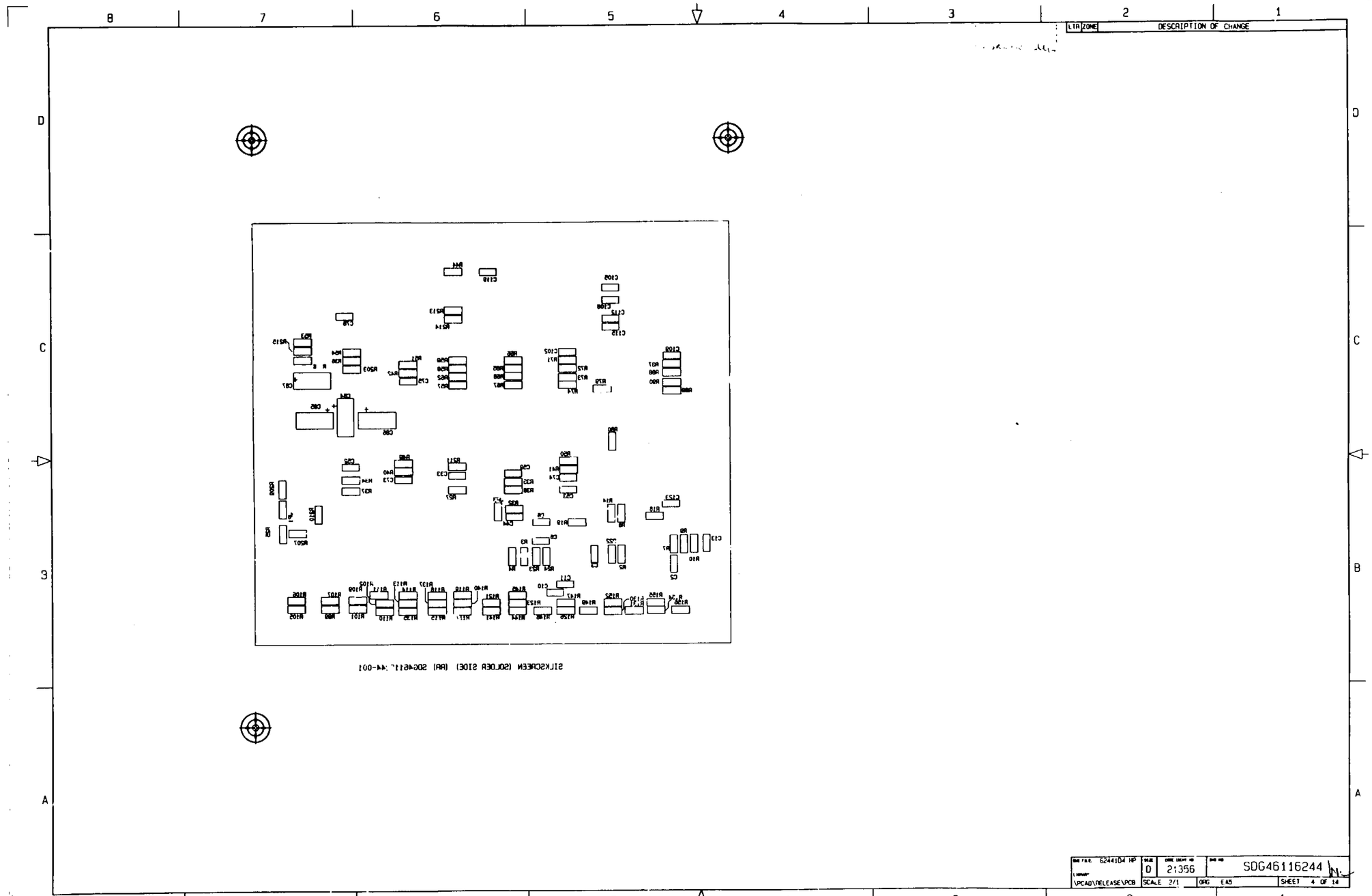
DWG FILE: 8244102.MP LIBRARY: \PCAD\RELEASE\PCB	SIZE D	CODE IDENT NO. 21356	DWG NO. SDG46116244 NC
	SCALE 2/1	ORIG EAS	SHEET 2 OF 14

LTR	ZONE	DESCRIPTION OF CHANGE



SILKSCREEN (COMPONENT SIDE) (RR) SDG46116244-001

6244103.HP	0	21356	SDG46116244
\PCAD\RELEASE\PCB	SCALE 2/1	DRG EAS	SHEET 3 OF 14


LTR ZONE DESCRIPTION OF CHANGE
SILKSCREEN (SOLDER SIDE) (AA) SDG46116244-001
6244104 HP
D
21356
SDG46116244
\PCAD\RELEASE\PCB
SCALE 2/1
ORG EA5
SHEET 4 OF 14

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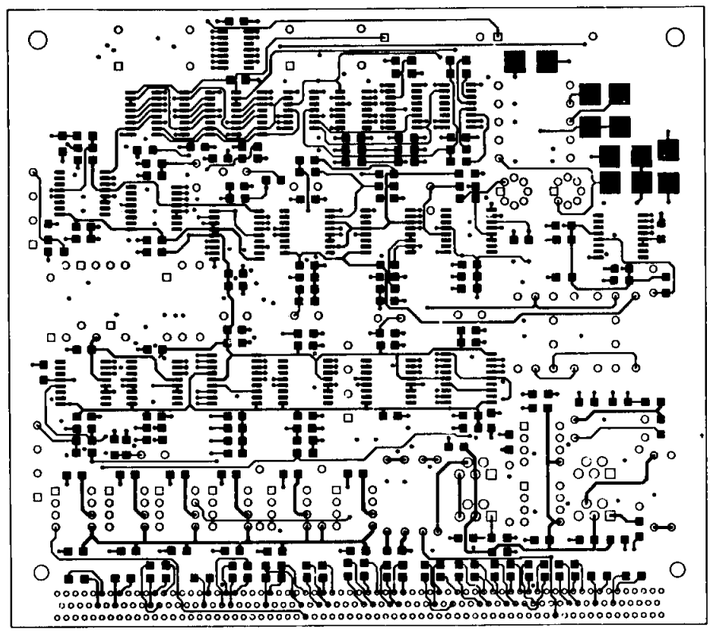
LTR	ZONE	DESCRIPTION OF CHANGE



LAYER 1 (COMPONENT SIDE) (RR) SDG46116244-001

6244105 HP	0	21356	SDG46116244
\PCAD\RELEASE\PCB	SCALE 2/1	DRG EAS	SHEET 5 OF 14

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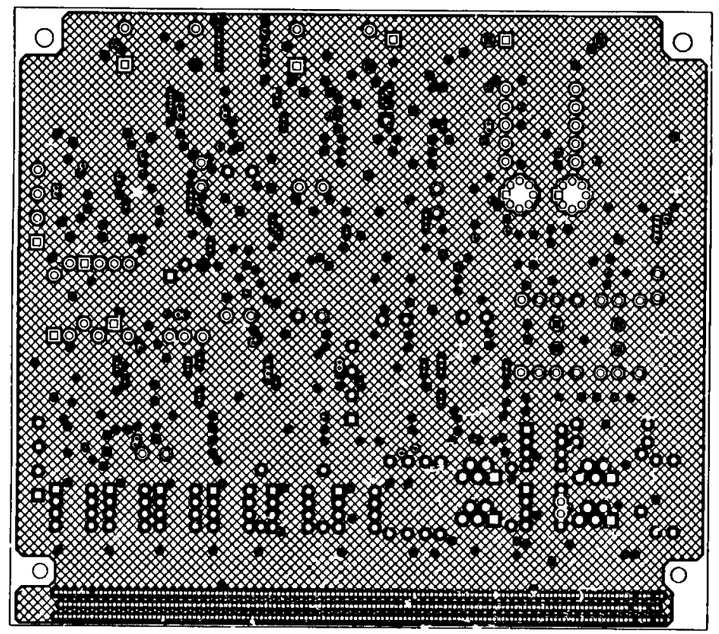
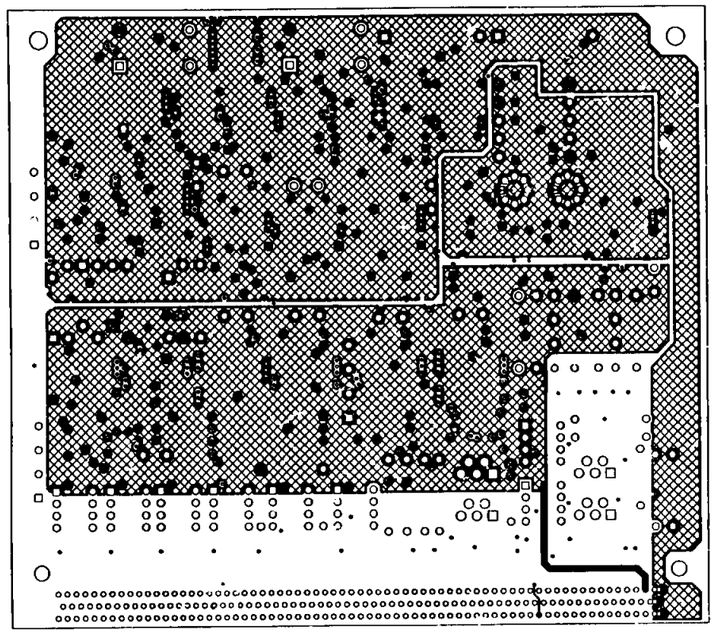
LTR	ZONE	DESCRIPTION OF CHANGE



LAYER 2 (INNER LAYER 1 - DGND PLANE) (RR) SDG46116244-001

6244106 HP	D	21356	SDG46116244
\PCADVRELEASE\PCB	SCALE 2/1	DRG. EAS	SHEET 6 OF 7

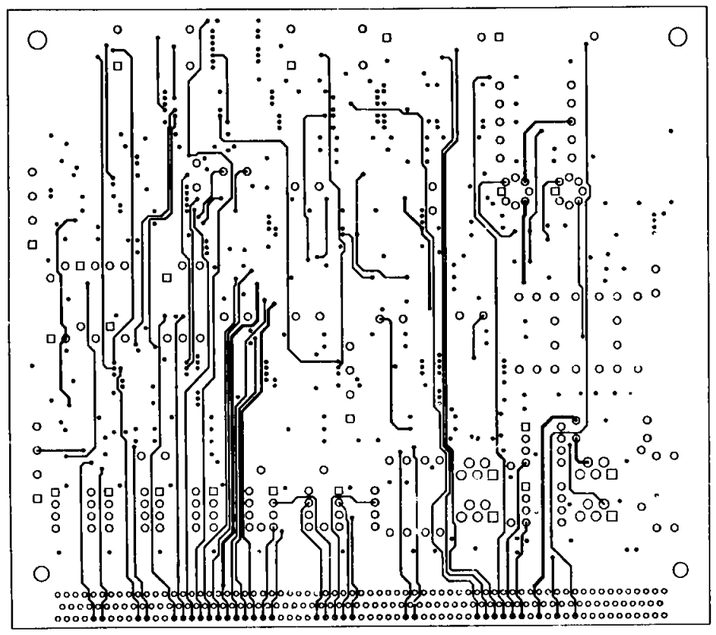
LTR	ZONE	DESCRIPTION OF CHANGE



LAYER 3 (INNER LAYER 2 - +5VCC, +12VPWR, AND +VA) (RR) SDG46116244-001

6244107 HP \PCAD\RELEASE\PCB	D	21356	SDG46116244 NC
	SCALE 2/1	DRG EAS	SHEET 7 OF 14

LTR	ZONE	DESCRIPTION OF CHANGE



LAYER 4 (INNER LAYER 3) (RR) SDG46116244 001

DWG FILE 6244108 HP \PCAD\RELEASE\PCB	SIZE D	CODE IDENT NO. 21356	DWG NO SDG46116244 NC
	SCALE 2/1	ORG. EAS	SHEET 8 OF 14

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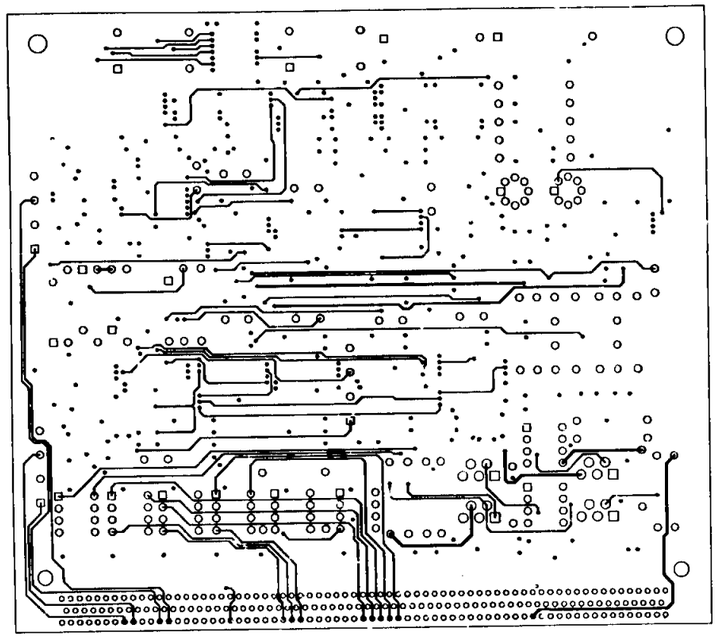
LTR	ZONE	DESCRIPTION OF CHANGE



LAYER 5 (INNER LAYER 4) DWG SDG46116244-001

6244109.HP	0	21356	SDG46116244 NC
\PCAD\RELEASE\PCB	SCALE 2/1	DRG. EAS	SHEET 9 OF 14

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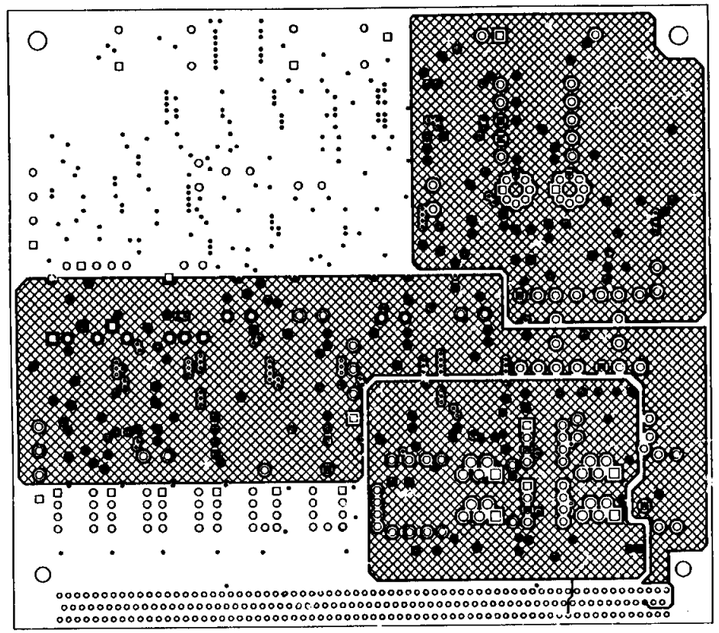

LAYER 6 (INNER LAYER 5 -12VPWR, AOGND, AND -VA) (RR) SDG46116244-001

LTR	ZONE	DESCRIPTION OF CHANGE

62441010.HP	D	21356	SDG46116244	NC
\PCAD\RELEASE\PCB	SCALE 2/1	DRG FA5	SHEET 10 OF 14	

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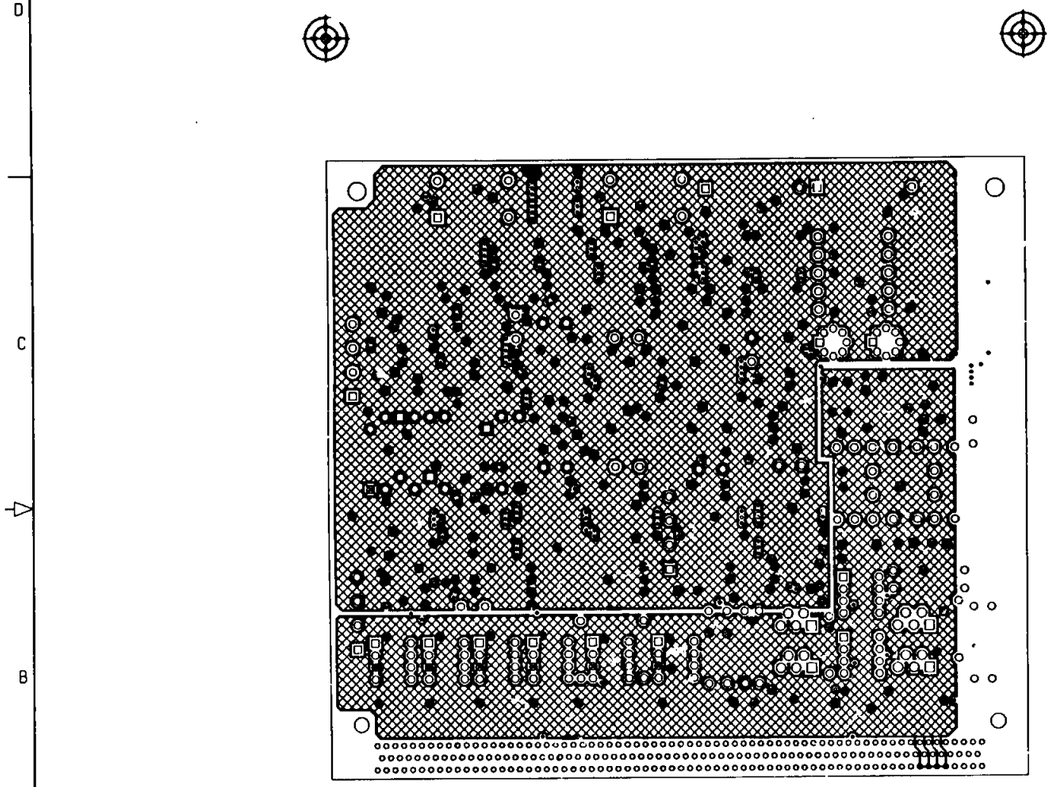

LAYER 7 (INNER LAYER 6 - LOGND AND DSPAGND PLANE) (RR) SDG46116244-001

LTR	ZONE	DESCRIPTION OF CHANGE

DWG/RS 62441D11 HP	SIZE D	CODE IDENT NO. 21356	DWG NO. SDG46116244	NC
LIBRARY \PCAD\RELEASE\PCD	SCALE 2/1	ORIG. EA5	SHEET 11 OF 14	

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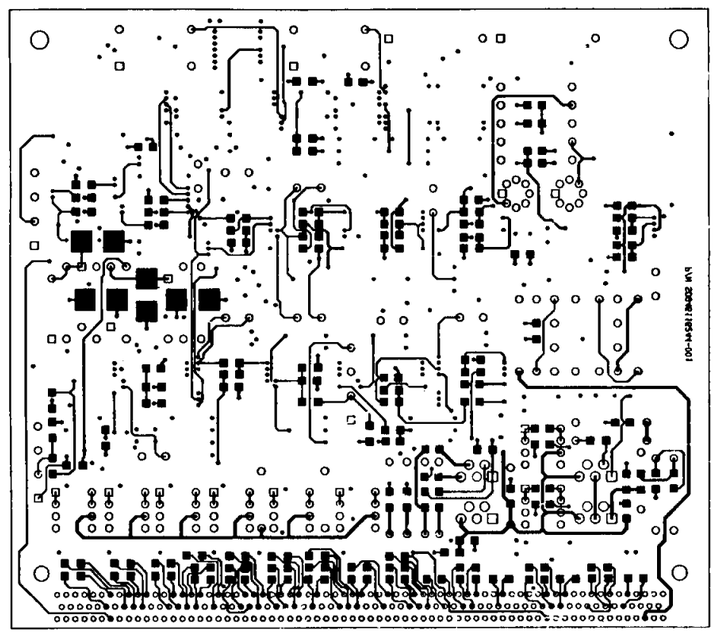
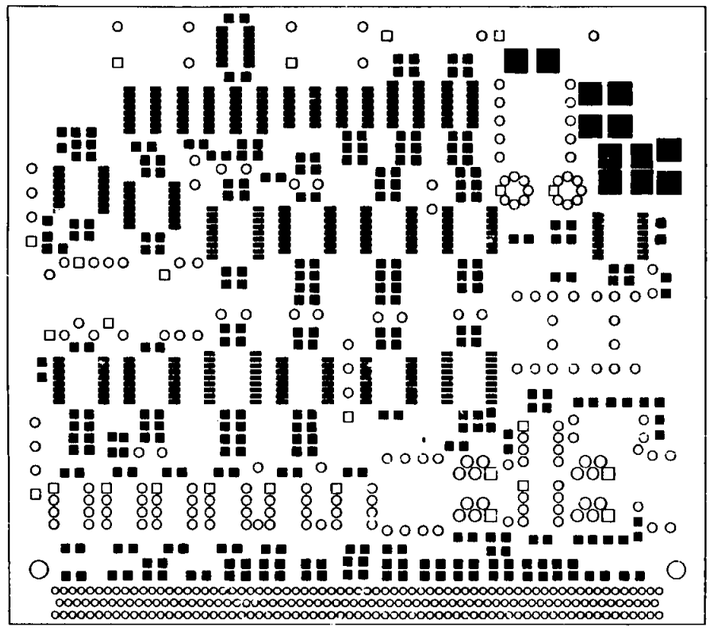
LTR	ZONE	DESCRIPTION OF CHANGE



\PCAD\RELEASE\PCB	SCALE 2/1	DRG EAS	SHEET 12 OF 14



SOLDERMASK (COMPONENT SIDE) (RR) SDG46116244-001

LTR	ZONE	DESCRIPTION OF CHANGE

DWG FILE: 62441013.HP	SIZE: D	CODE IDENT NO: 21356	DWG NO: SDG46115244
LIBRARY: \PCAD\RELEASE\PCB	SCALE 2/1	ORG. EA5	SHEET 13 OF 14

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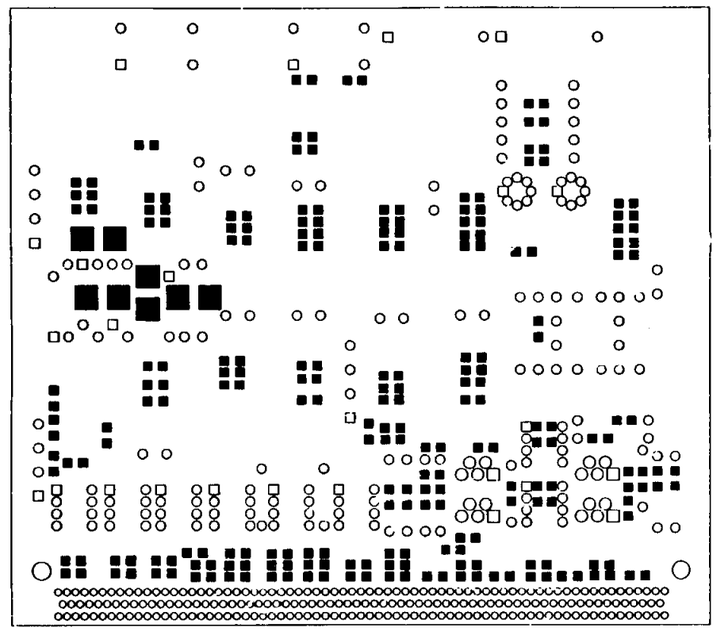
LTR	ZONE	DESCRIPTION OF CHANGE



SOLDERMASK (SOLDER SIDE) (AA) SDG46116244-001

82441014.HP	D	21356	SDG46116244
\PCAD\RELEASE\PCB	SCALE 2/1	DRN EAS	SHEET 14 OF 14

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