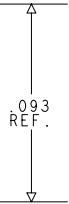
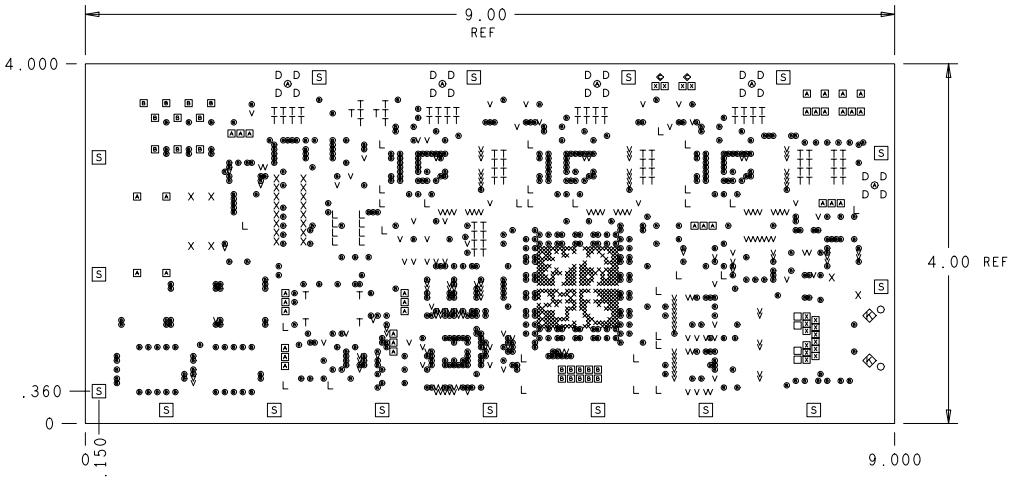


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

DRILL CHART			
ALL UNITS ARE IN INCHES			
FIGURE	SIZE	PLATED	QTY
x	0.01	PLATED	292
v	0.012	PLATED	194
•	0.0135	PLATED	659
T	0.03	PLATED	84
L	0.033	PLATED	38
▣	0.035	PLATED	16
x	0.038	PLATED	22
□	0.04	PLATED	4
▣	0.043	PLATED	35
▣	0.045	PLATED	20
⊙	0.06	PLATED	5
○	0.062	PLATED	2
◊	0.067	PLATED	20
◻	0.125	PLATED	16
◊	0.038	NON-PLATED	2
◻	0.126	NON-PLATED	2

NOTES:

1. PRIMARY / COMPONENT SIDE SHOWN.
2. LAYER ORIENTATION: SEE LAYER DETAIL.
3. MATERIAL: TETRA- OR MULTI- FUNCTIONAL FR-4 LAMINATES AND PREPREGS PER MIL-P-13949. MINIMUM GLASS TRANSITION TEMPERATURE (Tg) OF 170 DEGREE CENTIGRADE REQUIRED. PREPREG & CORE DIELECTRICS MUST BE A MINIMUM 2 PLY.
4. THICKNESS: 0.093" +/- 0.006" (FINISHED)
5. PLATING: - 1/2 OZ. PLATED TO 1.5 OZ. ON OUTER LAYERS
- 1/2 OZ ON INNER SIGNAL LAYERS.
- 1 OZ. ON PLANE LAYERS (NO PLATE)
- PLATED THROUGH HOLES SHALL HAVE A MINIMUM AVERAGE COPPER THICKNESS OF .001" WITH AN ABSOLUTE MINIMUM THICKNESS OF .0008", AS MEASURED IN MIL-P-55110.
- FINGER CONNECTIONS TO BE ELECTROLYTIC HARD GOLD (.50-100 MICROINCH) OVER LOW STRESS ELECTROLYTIC NICKEL (200 MICROINCH) PER IPC-D-275, TABLE 3-8 CLASS 2. NICKEL GOLD IMMERSION AFTER SOLDER MASK APPLICATION.
6. FINISH: .002" MINIMUM FOR EXTERNAL ANNULAR RING. .001" MINIMUM FOR INTERNAL ANNULAR RING.
7. ANNULAR RING: TANGENCY IS ACCEPTABLE ON .010" DIA. HOLES.
8. SOLDER MASK: LIQUID PHOTO IMAGEABLE;
SOLDER MASK OVER BARE COPPER BOTH SIDES.
SOLDER MASK REGISTRATION TO BE WITHIN +/- .003" OF ITS RESPECTIVE CIRCUIT LAYERS, AND NO MASK TO APPEAR ON PADS.
9. BOW AND TWIST: MAXIMUM OF .010 INCH / INCH FOR THROUGH HOLE BOARDS.
MAXIMUM OF .0075 INCH / INCH FOR SURFACE MOUNT BOARDS.
10. SILKSCREEN: WHITE NON-CONDUCTIVE INK. NO INK TO APPEAR ON COMPONENT PADS. LINES TO BE .006" MINIMUM.
11. PCB: NOMINAL CONDUCTOR WIDTHS ON FINISHED BOARD TO BE WITHIN +/-15%, OR +/-1 MIL, WHICHEVER IS LESS OF ARTWORK AS DEFINED ON GERBERS AND SUPPLIED APERTURE WIDTH.
12. ELECTRICAL TEST: FINISHED PCB TO BE SUBJECT TO 100% CONTINUITY AND ISOLATION ELECTRICAL TEST. TEST FIXTURES TO BE GENERATED FROM IPC-D-356 FORMATTED NET LIST DATA, CROSS-REFERENCED TO GERBER EXTRACTED NET LIST DATA. VENDOR TO TEST IMPEDANCE ON A COUPON.
13. HOLE CHART: UNLESS OTHERWISE SPECIFIED, ALL TOLERANCES ARE +/- .003"
14. SPACING: MINIMUM FINISHED CONDUCTOR SPACING TO BE 5 MILS
15. SPECIFICATION: UNLESS OTHERWISE SPECIFIED, FAB OF THIS PCB SHALL BE IN CONFORMANCE WITH THE FOLLOWING.
IPC-6011 CLASS 2 (GENERIC)
IPC-6012 CLASS 2 (RIGID)
16. FLAME CLASS: UL 94V-0 AND MUST MEET REQUIREMENTS OF UL796
17. MOT: MANUFACTURER MUST BE UL RECOGNIZED TO PRODUCE THIS PRODUCT SUCH THAT IT MEET 130 deg C MAXIMUM OPERATING TEMPERATURE
18. MARKINGS: THE FOLLOWING MUST BE MARKED OR ETCHED ON SIDE OF 2 OF PCB IN AREA FREE OF COMPONENT COVERING:
DATECODE (YYWW), UL RECOGNIZED VENDOR ID, UL TYPE DESIGNATION,
AND/OR MARKING WHICH REFLECT THE SPECIFIED FLAME CLASS AND MAXIMUM OPERATING TEMPERATURE RATINGS.
19. IMPEDANCE: 5.0 MIL TRACES WITH 8 MIL GAP FOR 100 OHM +/- 10%
DIFFERENTIAL SIGNALS ON LAYER 1 WITH LAYER 2 AS REFERENCE.



PRIMARY SIDE	LAYER 1		1/2 OZ
INTERNAL SIGNAL 1	LAYER 2		1/2 OZ
GROUND PLANE	LAYER 3		1 OZ
POWER PLANE +1.5/+5	LAYER 4		1 OZ
POWER PLANE +3.3	LAYER 5		1 OZ
GROUND PLANE	LAYER 6		1 OZ
INTERNAL SIGNAL 2	LAYER 7		1/2 OZ
SECONDARY SIDE	LAYER 8		1/2 OZ

LAYER DETAIL
CONSTRUCTION LAMINATE THICKNESS
AT VENDORS' DISCRETION

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TOLERANCES (UNLESS OTHERWISE NOTED)			
.XX	+/- .01	FRACTIONS	ANG
.XXX	+/- .005	+/- 1/64	1/2°
DRAWN	FREEDOM CAD	06/09/04	TITLE FABRICATION DRAWING RVP8/IFD
CHECKED			
ENGR APPD			
ENGR APPD			
PROJECT MANAGER			SIZE D
		DRAWING NUMBER RVP8/IFD	REV F
SCALE 1/1 SHEET 1 OF 1 FREEDOMCAD#581003F1 LEVEL			