



877	13.78mil	0.35mm	PTH
83	13.78mil	0.35001mm	PTH
48	31mil	0.7874mm	NPTH
54	35.433mil	0.9mm	PTH
59	39.37mil	1mm	PTH
6	129.921mil	3.3mm	PTH
5	137.795mil	3.5mm	PTH
4	157.48mil	4mm	NPTH
1136	Total		

## FABRICATION NOTES:

### 1. MATERIAL:

- FR4, COLOR GREEN, B-STAGED PREPREG.
- INTERNAL LAYERS: 35um COPPER CLAD.
- EXTERNAL LAYERS: 17.5um COPPER FOIL.
- FINISHED THICKNESS: 1.6mm +/- 0.18mm.

### 2. DRILLING:

- DRILL SIZE TOLERANCE UP TO 1.25mm +0.1mm/-0.05mm, (+/-0.1MM ACCEPTABLE FOR VIAS).  
DRILL SIZE TOLERANCE OVER 1.25mm +/-0.15mm.
- HOLE LOCATIONS NOT TO EXCEED 0.05mm FROM TRUE POSITION.
- SEE DRILL TABLE FOR HOLE SIZES AND PLATING REQUIREMENTS.

### 3. PLATING:

- MINIMUM PLATING THICKNESS IN HOLES = 25um.
- MINIMUM TOTAL COPPER THICKNESS ON EXTERNAL LAYERS AFTER PLATING = 35um.

### 4. ETCHING:

- LAYER TO LAYER MIS-REGISTRATION NOT TO EXCEED 75um FROM TRUE POSITION.
- ETCHED PATTERN TO BE WITHIN +/- 25um OF FILM PATTERN.
- SEE TARGET IMPEDANCE TABLE FOR CONTROLLED IMPEDANCE SPECIFICATIONS WHEN REQUIRED.

### 5. SOLDERMASK:

- SOLDERMASK TO BE LIQUID PHOTOMAGEABLE (LPI), COLOR GREEN, OVER BARE COPPER (SMOBC).
- SOLDERMASK IS NOT PERMITTED IN COMPONENT HOLES OR ON COMPONENT PADS.
- SOLDERMASK SHOULD WITHSTAND A MINIMUM OF 500 VDC OF BREAKDOWN VOLTAGE.
- NO SOLDER PICK UP/WICKING DURING WAVE SOLDER.
- MEETS A MINIMUM INSULATION RESISTANCE OF 500 MEGAOHMS.
- THE THICKNESS SHALL BE A MINIMUM OF 18um, MAXIMUM OF 63.5um (25um NOMINAL).

### 6. FINISH:

- EXPOSED COPPER TO BE PLATED USING ELECTROLESS NICKEL IMMERSION GOLD (ENIG)
- FINISHED SURFACE TO BE FREE OF BUBBLES, BLISTERS, AND SOLDER.

### 7. SILKSCREEN:

- SILKSCREEN TO BE WHITE EPOXY INK ON PRIMARY SIDE
- INK IS NOT PERMITTED IN COMPONENT HOLES OR ON COMPONENT PADS.

### 8. MAXIMUM CAMBER ALLOWED IS 0.01 mm/mm.

### 9. MINIMUM CONDUCTOR WIDTH USED ON THIS DESIGN IS 0.20mm. MINIMUM CLEARANCE IS 0.20mm. TYPICAL CLEARANCE IS 0.20mm.

### 10. BARE BOARD TEST REQUIRED.

### 11. Mech layer 2 = Routing layer, 80thou bit

PSEUD02

DRAWING NUMBER:	LAYER:
	Mechanical Layer 4
TITLE:	KiwiSat
REV: 2.0	DATE: 27-May-2008
DRAWING:	UNLESS OTHERWISE STATED ALL DIMENSIONS IN mm
Terry Osborne	THIRD ANGLE
	DRAWING SCALE: SCALE: 0.85