

NOTES: UNLESS OTHERWISE SPECIFIED

1. MILLIMETERS (mm) ARE THE CONTROLLING DIMENSIONS FOR THE DRAWINGS AND SUPPLIED DATA. INCH DIMENSIONS ARE FOR REFERENCE ONLY.
2. FABRICATE PCB IN ACCORDANCE WITH IPC-6012A, CLASS 2; PER IPC-6011 USING CUSTOMER SUPPLIED DATA FILES.
3. MATERIALS:

A. LAMINATE AND PREPREG (B-STAGE) TO BE IN ACCORDANCE WITH IPC-4101/24 OR IPC-4101/26. MATERIAL MUST MEET UL 94V-0 FLAMABILITY RATING.

B. COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MF-150. UNLESS OTHERWISE SPECIFIED, ALL COPPER WEIGHT FOR INNER LAYERS TO BE 17µm (0.5 OZ) AND FOR OUTER LAYERS 35µm (1.0 OZ). COPPER WEIGHT IS TO BE CONSIDERED “FINISHED”.
4. ALL HOLES SHALL BE LOCATED WITHIN 0.216 (0.0085”) DIAMETER TRUE POSITION. LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.127 (0.005”)..
5. FINISH:

A. ALL EXPOSED CONDUCTIVE PATTERN AREAS NOT COVERED WITH SOLDERMASK OR OTHER PLATING SHALL BE HOT AIR SOLDER LEVELED (HASL) USING SN63A TIN LEAD SOLDER PER ANSI/J-STD-006.

A. ALL EXPOSED CONDUCTIVE PATTERN AREAS NOT COVERED WITH SOLDERMASK OR OTHER PLATING SHALL BE PLATED WITH ORGANIC SURFACE PROTECTANT (OSP).

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B. APPLY LIQUID PHOTO IMAGEABLE SOLDER MASK PER IPC-SM-840, CLASS H, TO BOTH SIDES OF THE BOARD OVER BARE COPPER. VIA HOLES COVERED WITH SOLDERMASK DO NOT NEED TO BE PLUGGED. ONLY SOLDER MASK IMAGES THAT ARE THE SAME SIZE AS THE COMPONENT PADS MAY BE ENLARGED, AND SHALL NOT BE ENLARGED BEYOND 0.08 (.003”) PER SIDE OR 0.15 (.006”) OVERALL. ALL OTHER SOLDER MASK IMAGES SHALL NOT BE ENLARGED.

C. SILKSCREEN SHALL BE WHITE, PERMANENT, ORGANIC, NON-CONDUCTIVE INK. THERE SHALL BE NO SILKSCREEN ON ANY SOLDERABLE COMPONENT PAD.

6. MARKING:

A. BOARD PART NUMBER AND REVISION LETTER IS RENDERED IN ETCH ON THE BOTTOM SIDE OF THE BOARD. REVISION LETTER SHOULD BE IDENTICAL TO THIS DRAWING.

B. UL LOGO, MANUFACTURER'S IDENTIFICATION AND DATE CODE LETTER SHALL BE RENDERED IN ETCH ON THE BOTTOM SIDE OF THE BOARD APPROXIMATELY WHERE SHOWN.

7. TEST REQUIREMENTS:

A. 100% NETLIST ELECTRICAL VERIFICATION USING CUSTOMER SUPPLIED IPC-D-356 NETLIST FOR OPENS AND SHORTS. ALL NETS SHALL BE ACCESSED SIMULTANEOUSLY OR AS OTHERWISE MUTUALLY AGREED UPON.

B. HIPOT TEST ALL PREPREG/CORE MATERIAL LESS THAN 0.0025 THICK AT 500VDC FOR 30 SECONDS MINIMUM. TEST SHOULD BE DONE AT THE LAYER STAGE AND AGAIN PRIOR TO PACKAGING.
8. TOLERANCES:

A. WARP OR TWIST OF BOARD SHALL NOT EXCEED 1%.

B. CONDUCTOR WIDTHS AND SPACING SHALL BE WITHIN +/- 0.03 (0.001”) OF GERBER DATA.

C. REMOVE ALL BURRS AND BREAK SHARP EDGES 0.4 (0.015”) MAXIMUM.

D. SURFACE MOUNT PAD PLATING MUST BE FLAT TO A MAXIMUM OF 0.08 (0.003”) ABOVE BOARD SURFACE.

E. 1.5 (0.059”) MAXIMUM RADIUS ON ANY INSIDE CORNERS.

F. CONTROLLED IMPEDANCE:

1. 50 OHMS ON OUTER LAYERS. IMPEDANCE STRUCTURE DEFINED AS xxxmm STRIPLINE REFERENCED TO LAYERS 2 AND x.

2. 50 OHMS ON INNER LAYERS. IMPEDANCE STRUCTURE DEFINED AS xxxmm MICROSTRIP REFERENCED TO NEAREST PLANE.

9. THEIVING:

A. SUPPLIER MAY ADD THEIVING TO COMPENSATE FOR HIGH COPPER DENSITY AREAS ON THIS DESIGN.

B. THE FOLLOWING GUIDELINES MUST BE ADHERED TO IN ORDER TO MAINTAIN ELECTRICAL AND MECHANICAL INTEGRITY OF THE DESIGN:

1. THEIVING TO CARD EDGE SPACING 2.5 (.100”) MINIMUM.

2. THEIVING TO FIDUCIAL SPACING 5.0 (.200”) MINIMUM.

3. THEIVING TO NON-PLATED THROUGH HOLES 5.0 (.200”) MINIMUM.

4. THEIVING TO ALL OTHER FEATURES 0.25 (.100”) MINIMUM.

5. THERE SHALL BE NO EXPOSED THEIVING IN ANY AREA FREE OF SOLDERMASK OR INTERNAL COPPER PLANE.

10. PLATE EDGE CONNECTOR 0.8µm (0.000032”) MIN. GOLD THICKNESS OVER 2.5µm (0.00098”) MIN. LOW STRESS NICKEL.

11. LAYER STACKUP DETAIL AS BELOW.
- 2 LAYER STACKUP

SILKSCREEN (TOP)
LPI SOLDERMASK (TOP)
LAYER 1 (TOP) 52µm Cu (1.5 oz)

1.60mm (0.062")
±0.15mm (0.006")

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LAYER 2 (BOTTOM) 52µm Cu (1.5 oz)
LPI SOLDERMASK (BOTTOM)
SILKSCREEN (BOTTOM)

				AUTOCAD RELEASE 2004	LEGGER : <div>SCHAAL : - MAATEENHEID mm</div>	GETEKEND : L.J.H. TIMMERMAN	
					DATUM : 18-01-2006	AFDELING : MyElectronics/work	
00	30-10-2003	L.J.H. TIMMERMAN	FIRST ISSUE		L.J.H. TIMMERMAN		
					BENAMING : VLF-SCOPE : INPUT CHANNEL X		
REV.	DATUM	GETEKEND	GEZIEN	OMSCHRIJVING VAN DE WIJZIGING	FRONT PCB FABRICATION NOTES		
					NUMMER : 52.002.00 1 OF 1	.02.01	FORM: A3