





DESIGN INFORMATION	
BOARD SIZE (PREFER ALSO ARRAY/PANEL PROFILING INFORMATION)	
3550ML X 5000ML	
Number of Layers: 8	
MIN. TRACK WIDTH: 9 ML	
MIN. CLEARANCE: 8 ML	
MIN. VIA PAD SIZE: 24 ML	
MINIMUM ANNUAL RING 0.05mm (2ML) EXTERNAL	
PER IPC-D-278 CLASS 2 LEVEL C	
REGISTRATION TOLERANCES: METAL +/- 5 ML; HOLES +/- 3 ML	
MATERIAL:	
<input type="checkbox"/> FR-4 <input checked="" type="checkbox"/> FR-4 High Tg <input type="checkbox"/> OTHER	
THICKNESS: <input checked="" type="checkbox"/> 62 ML (1.6mm) +/-10% <input type="checkbox"/> OTHER	
TOLERANCE: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/-	
BOW & TWIST: <input checked="" type="checkbox"/> ANSI IPC-6012 TYPE 3 CLASS 2	
<input type="checkbox"/> OTHER +/-	
COPPER THICKNESS (FINISHED):	
OUTER: <input type="checkbox"/> 1.4ML (1oz) <input type="checkbox"/> 2ML (1.4oz) <input checked="" type="checkbox"/> 2.8ML (2oz)	
INNER SIGNAL: <input type="checkbox"/> 1.4ML (1oz) <input checked="" type="checkbox"/> 2.8ML (2oz)	
DRILLING:	
REFERENCE: <input checked="" type="checkbox"/> AS SHOWN <input checked="" type="checkbox"/> NC DRILL FILES	
PTH MIN COPPER THICKNESS: <input checked="" type="checkbox"/> 1ML <input type="checkbox"/> OTHER	
BOARD FINISH:	
SILKSCREEN: <input checked="" type="checkbox"/> TOP <input checked="" type="checkbox"/> BOTTOM	
SILKSCREEN COLOR: <input checked="" type="checkbox"/> WHITE <input type="checkbox"/> OTHER	
SOLDER RESIST COLOR:	
<input checked="" type="checkbox"/> GREEN <input type="checkbox"/> BLUE <input type="checkbox"/> OTHER	
SURFACE FINISH: <input checked="" type="checkbox"/> IMMERSION GOLD (ENIG) <input type="checkbox"/> Pb-FREE HASL	
<input type="checkbox"/> OTHER	
ARRAY/PANEL:	
<input type="checkbox"/> N/C ROUTE <input checked="" type="checkbox"/> V. SCORE	
CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PORTS TO MEET OR EXCEED THE REQUIREMENTS OF:	
<input checked="" type="checkbox"/> ANSI IPC-A-600F CLASS -> <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3	
<input checked="" type="checkbox"/> UL 94V-0 <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> OTHER PER ORDER	
ADDITIONAL REQUIREMENTS:	
MICROSECTIONS: <input type="checkbox"/> YES	
BARE BOARD ELEC. TEST: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> PER ORDER	
MANUFACTURER'S D. LOGO: <input type="checkbox"/> RAL <input checked="" type="checkbox"/> METAL <input type="checkbox"/> SILK	
PROJECT FILE:	
SIP0900-WMT-EU-10000	
DESIGNED FOR:	
National Semiconductor	
PAC NUMBER:	
FAB DRAWING NUMBER:	
40040964	
ALUM DESIGN VERSION:	
EN.1.7.101	

- Update the notes below per your unique requirements.
- In most cases, you should be able to delete or modify lines.
- NOTES UNLESS OTHERWISE SPECIFIED
1. MATERIALS PER IPC-100/24
 - 2A. UNFINISHED TYPE 80% GRADE A, CLASS 2, AND TYPE FR-4
 - 2A. LAMINATED HIGH-TEMPERATURE FR4
 - 3A. COPPER LAYERS .0008 +/- .0005 INCH OUTER, .0008 +/- .0005 INCH INNER LAYERS.
 - 3C. ALL COPPER LAYERS MUST BE SPACED PER DETAIL A +
 - 3D. BOARD THICKNESS IS REQUIRED INCLUDING TOP AND BOTTOM SIDES FINISHED COPPER, ANY TIN, TIN-LEAD OR GOLD PLATING, SOLDERMASK AND SILKSCREEN LEGEND MUST NOT BE INCLUDED IN FINISHED BOARD THICKNESS.
 - 3E. ALL INNER LAYERS MUST BE GLOSS COATED.
 4. ALL CONDUCTOR LAYERS MUST BE REGISTERED WITHIN +/- .005 INCH FROM TRUE POSITION.
 - 4A. ETCH TOLERANCES
 - 5A. ALL EXTERNAL LAYERS CONDUCTOR WIDTH MUST BE WITHIN +/- .005 INCH ON +/- 10% OF GERMER DATA, WHICHEVER IS SMALLER.
 - 5B. ALL INTERNAL LAYERS CONDUCTOR WIDTH MUST BE WITHIN +/- .005 INCH ON +/- 10% OF GERMER DATA, WHICHEVER IS SMALLER.
 6. CRITICAL DIMENSIONS FOR THIS DESIGN ARE:
 6A. DRILL TOLERANCES AND HOLE SIZES ARE FOR FINISHED BOARD.
 6B. ALL .004 INCH HOLE DIA. HOLES ARE +/- .001 INCH.
 6C. ALL PLATED THROUGH HOLES TO .000 INCH ARE +/- .002 INCH.
 6D. ALL PLATED THROUGH HOLES OVER .002 INCH ARE +/- .005 INCH.
 6E. ALL NON-PLATED THROUGH HOLES ARE +/- .005 INCH.
 6F. ALL HOLES MUST BE REGISTERED WITHIN +/- .002 INCH FROM TRUE POSITION.
 7. MINIMUM ANNUAL RING MUST BE .002 INCH.
 - 7A. PLATING
 - 7B. PER IEL-C-14850, PLATED THROUGH HOLES MUST BE PLATED WITH .0008 INCH TO .0005 INCH MIN. THICK COPPER.
 - 7C. FINISH: IMMERSION GOLD 2 TO 8 MICROINCHES GOLD OVER 120-240 MICROINCHES OF ELECTROLESS NICKEL.
 8. WARP AND TWIST OF FINISHED BOARDS MUST NOT EXCEED .007 INCH PER INCH.
 9. SOLDERMASK PER IPC-91-940
 - 9A. SOLDERMASK BOTH TOP AND BOTTOM SIDES.
 - 9B. SOLDERMASK MUST COVER ALL LAYERS SHOWN ON GERMER SOLDERMASK LAYERS.
 - 9C. COLOR GREEN AND SOLVENT FREE.
 10. LIQUID PHOTO-IMMUNABLE MUST BE .0002 INCH TO .0008 INCH THICK FINISHED OVER COPPER PLATING.
 - 10A. SILKSCREEN TOP AND BOTTOM SIDES USING A SOLUBLE WHITE, NONCONDUCTIVE, TYPICAL BRNED INK.
 - 10B. NO SILKSCREEN ALLOWED ON GOLD AREAS, ON PADS OR IN HOLES.
 11. ROUTE BOARD OUTLINE, PER SHOWN DIMENSIONS.
 12. VENDOR MUST ENTER VENDOR'S IDENTITY, DATE CODE AND ANY OTHER IDENTIFICATION MARKS ON BOTTOM SIDE ETCH (APPROXIMATELY WHERE SHOWN, IF SHOWN)
 13. OTHER VENDOR NOMENCLATURE OR MARKINGS SHOULD NOT BE ETCHED OR SILKSCREENED ON BOARD WITHOUT PRIOR PERMISSION.
 14. ALL VENDOR IN-PROCESS PHENOMENA, ON STAMPS, ETC. MUST BE PLACED ON THE BOTTOM SIDE OF BOARD.
 15. FINISHED BOARD MUST MEET UL94-0 BURNING AND BARS COMPLIANCE.
 16. DOCUMENTATION THAT MUST BE DELIVERED WITH BOARD
 - 16A. CROSS SECTION REPORT (SPACING BETWEEN COPPER LAYERS AND COPPER THICKNESS)
 - 16B. ELECTRICAL TEST CERTIFICATION OF COMPLIANCE (ACCORDANCE WITH IPC-ET-802 CLASS 1)
 - 16C. BARS CERTIFICATE OF COMPLIANCE.
 - 16D. REQUIREMENTS OF CRITICAL DIM AND/OR TRACE DIMENSIONS INDICATED ON NOTE 3C
 - 16E. IMPEDANCE REPORT (REQUIRED IMPEDANCE TRACES PER NOTE 1B)
 17. ALL TOP AND BOTTOM LAYER .004x TRACES TO BE 4x 60% IMPEDANCE.
 18. ALL INTERNAL LAYER .004x TRACES TO BE 4x 60% IMPEDANCE.
 19. TRACE WIDTH AND LAYER SPACING MAY BE CHANGED TO ACCOMMODATE FABRICATION PROCESS BUT PRIOR APPROVAL IS REQUIRED BEFORE TRACE WIDTH OR LAYER SPACING CHANGES ARE MADE.



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