

USED ON:
Stand Alone

DRAWING No.
18082003

DESIGN INFORMATION

BOARD TECHNOLOGY: 5 TRACK / 26 VIA / 5 SPACE BOARD SIZE (REFER ALSO PROFILING INFORMATION): 241.0 mm X 92.4 mm
 (MIN. TRACK / PADS / CLEARANCE IN 0.001")
 (MINIMUM ANNULAR RING 0.05MM (0.002") EXTERNAL PER IPC-D-275 CLASS 2 LEVEL C AND IS THE MANUFACTURING REGISTRATION ALLOWANCE)
 LAND SIZE CALCULATION MINIMUM - NOMINAL HOLE SIZE + 0.508mm (0.020")

CIRCUIT TYPE: SS DS PTH MULTILAYER Number of Layers: _____
 FINGER CONNECTOR DIM PER: AS PER DRAWING AS SHOWN
 No. OFF TOTAL: 2 ONE SIDE BOTH SIDES

VIA: NONE FEED THRU TENTED BURIED LAYER SEQUENCE _____
 UNIQUE DRILL 2 SIZES BLIND LAYER SEQUENCE _____

LAYER CONSTRUCTION PER: STANDARD AS SHOWN

ARTWORK: MANUAL DIGITISED CAD FILE NAME: JAMMANALYZER.DDB
 FILE TYPE: PROTEL99SE.DDB FORMAT

ARTWORK/PATTERN MASTER LIST

| DESCRIPTION | DRAWING No./CAD FILE REF. | VERSION |
|-----------------------|---------------------------|---------|
| COMPOSITE DESIGN FILE | JAMMANALYZER.DDB | B |

MATERIAL: FR4-01 FR4-04 FR4-08 POLYIMIDE ARLON

THICKNESS: 0.8mm 1.2mm 1.6mm 2.4mm 3.2mm
 TOLERANCE: N A/W IPC-D-300G CLASS 2 LEVEL C OTHER +/- _____
 BOW & TWIST: N A/W IPC-D-300G CLASS 2 LEVEL C AS SHOWN

COPPER THICKNESS (FINISHED)

OUTER: 18um 35um 70um
 INNER SIGNAL: 18um 35um 70um
 INNER PWR: 18um 35um 70um

STRUCTURE: REFER AS PER DRAWING No. _____ AS SHOWN

DRILLING:

VIEWED FROM: COMPONENT SIDE SOLDER SIDE
 REFERENCE: AS SHOWN PATTERN MASTER LIST NC_DRILL FILES
 PTH MINIMUM COPPER THICKNESS: 20um OTHER _____
 NPTH: TENTED PADS REMOVED REMOVE PADS
 2nd DRILL BOTH AS SHOWN NONE

BOARD FINISH: ETCHING REFER PATTERN MASTER LIST

LEGEND / SCREEN PRINT: NONE COMPONENT SOLDER
 COLOUR: WHITE YELLOW OTHER _____

SOLDER RESIST: LIQUID PHOTOMAGEABLE SCREEN PRINT
 COLOUR: MATTE GLOSS GREEN BLUE YELLOW OTHER _____

TRACK FINISH: SELECTIVE SOLDER REFLOW SOLDER
 0.2um IMMERSION GOLD FINISH
 REFER PATTERN MASTER LIST OTHER _____

EDGE BOARD CONTACTS: 2.5um HARD GOLD OVER 5.0um NICKEL / TIN-NICKEL
 HARD FINISH GOLD PLATE OTHER _____
 AS SHOWN REFER

PROFILING: CUT AND TRIM ACCORDING TO KEEPOUT LAYER
 REFER PCB BLANK DWG No. _____
 USE PROFILE / ROUTE TAPE SUPPLIED (REFER PATTERN MASTER LIST)
 SQUARE CUT N.C. ROUTE V. SCORE BLANK

ACCEPTABILITY: MATERIALS AND WORKMANSHIP FOR ALL PRINTED WIRING BOARDS TO MEET OR EXCEED THE REQUIREMENTS OF:

IPC-RG-276 AND IPC-A-600E 1 2 3
 UL CERTIFICATION AUSTEL
 ML-P-55110E GRP A B AS2546 OTHER _____

ADDITIONAL REQUIREMENTS:

MICROSECTION: NONE SAMPLE PLAN ML-P-55110E SERIAL Nos. PER ORDER
 CERTIFICATION: NONE ML-P-55110E GRP A B IPC CLASS: 1 2 3
 QUALITY RELEASE REPORT OTHER _____

ELECTRICAL TEST: Bare Board NONE REQUIRED PER ORDER
 SURFACE MOUNT: NONE 1 SIDE 2 SIDES MIN. PITCH _____
 MANUFACTURER'S D/LOGO: NONE FOL LEGEND REFER
 MANUFACTURER'S ACCREDITATION: ISO9001/AS3901 NONE
 PACKAGING AND HANDLING: PER ORDER REFER

BUILD STATISTICS

GENERAL

NETS: 336
 COMPONENTS: 214

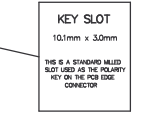
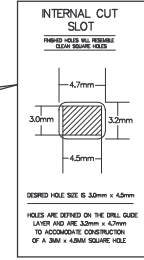
PHYSICALS

FILES: 5093
 TRACKS: 140740
 STRINGS: 684
 ARCHS: 7817

LANDS

PADS: 1281
 VIAS: 2099

PRINT SCALE: SCALED 0.34

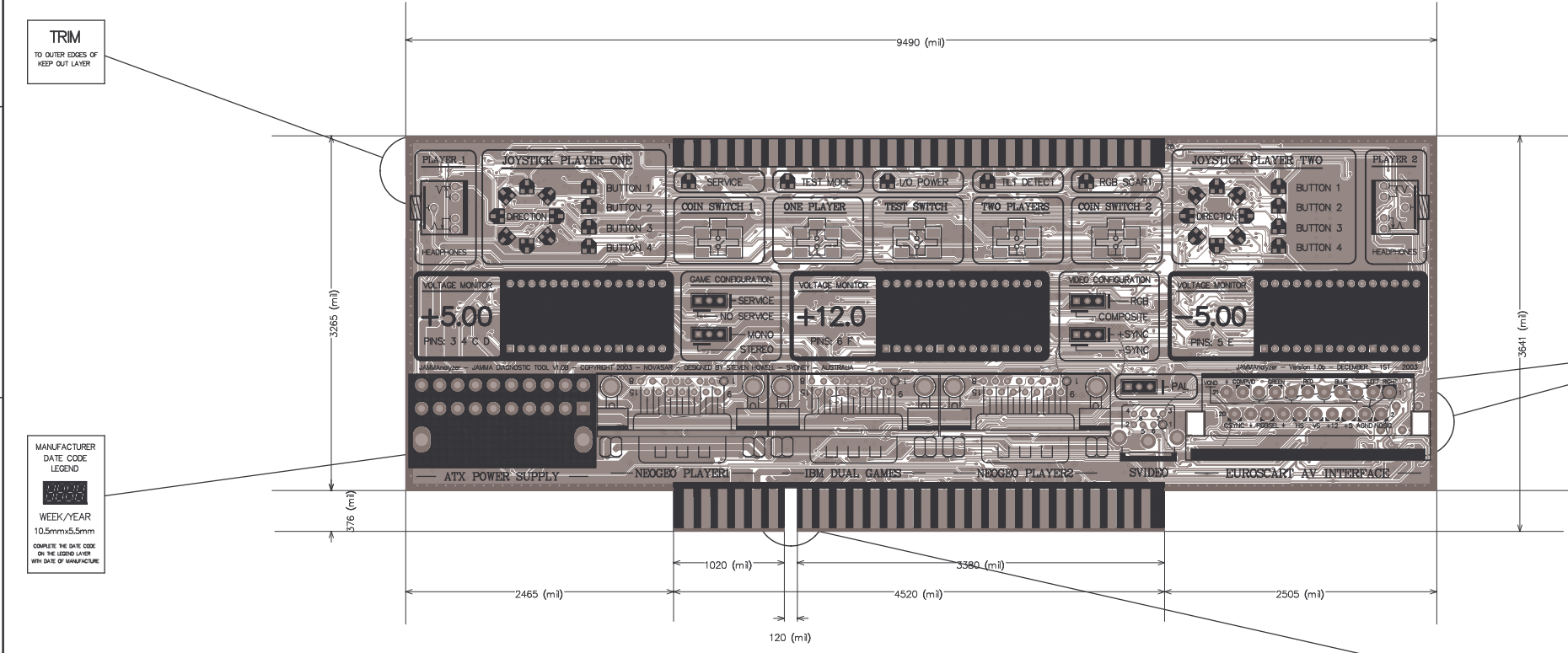


VERIFICATION

ERC
 01-DEC-03
 0 ERROR(S)

DRC
 09-DEC-03
 0 VIOLATION(S)

SYNCHRONIZED
 01-DEC-03
 0 ERROR(S)



MANUFACTURER DATE CODE LEGEND

WEEK/YEAR
 10.5mmx5.5mm
 COMPLETE THE DATE CODE ON THE SECOND LAYER WITH DATE OF MANUFACTURE

- BUILD CONFIGURATION AND SPECIFICATIONS SUMMARY**
- 2 Layer Build
 - 5 Thou Tracks / 5 Thou Spacing
 - 26 Thou Via / 13 Thou Hole
 - 1/2 Oz Copper Clad
 - Hard Gold Finish
 - Matte Dark Green Solder Mask
 - White "OVERLAY" Silkscreen
 - Standard FR4 Material
 - Must Be BBT (Bare Board Tested)
 - Board Thickness Approx 1.6mm
 - Drill Drawing Denotes Square Cutsouts
 - DO NOT TRIM "OVERLAY" (Silkscreen)
 - All Vias are TENTED (Covered)
 - Black Oxide over Copper on outer layers
 - Trim Board to "KEEPOUT LAYER" Layer
 - Foiled Boards to Include Overlay/Silkscreen
 - Standard Turn Around Delivery of 10-12 Working Days

| SYMBOL | QUANTITY | FINISHED HOLE SIZE | TYPE | COMMENTS |
|--------|----------|--------------------|--------|----------|
| T16 | | | | |
| T15 | | | | |
| T14 | | | | |
| T13 | | | | |
| T12 | | | | |
| T11 | | | | |
| T10 | | | | |
| T9 | | | | |
| T8 | | | | |
| T7 | | | | |
| T6 | 2069 | 13.78mil | 0.35mm | PTH |
| T5 | 162 | 35.433mil | 0.9mm | PTH |
| T4 | 33 | 47.244mil | 1.2mm | PTH |
| T3 | 20 | 62.992mil | 1.6mm | PTH |
| T2 | 3 | 86.614mil | 2.2mm | PTH |
| T1 | 8 | 118.11mil | 3mm | PTH |
| 2295 | | Total | | |

| TOLERANCE ON HOLE SIZE | HOLE SIZE | NPTH HOLES | PTH HOLES |
|------------------------|-----------|------------|-----------|
| 0 TO 0.8 | | +/- 0.03 | +/- 0.05 |
| 0.81 TO 1.6 | | +0.05/- 0 | +/- 0.05 |
| 1.61 TO 5.0 | | +/- 0.08 | +/- 0.10 |

PCB MATERIAL SPEC

$\epsilon_r = 4.9$

- Standard FR-4-01

Polygon Pour Spec

- Ground Pour on TL and BL
- Clearance of Pour is 10 Thou
- Constructed with Tracks and Arcs
- Connected to Net *GND
- Thermal Relief on all Pads
- All Dead Copper Removed

| ECO | ISSUE | STATUS | DESCRIPTION OF DRAFT | PROJECT | JAMMA DIAGNOSTIC TOOL V1.0 | DATE |
|-----|--------|--|----------------------|-----------|---|------|
| B | UPDATE | ADDED NTSC VIDEO DECODER, SMPs AND SECONDARY +5 ANALOG LOW NOISE REG | S.H. | 03.DEC.03 | IP STATUS: COPYRIGHT - 2003 - NOVASAR | |
| A | FINAL | PRELIMINARY - FIRST ISSUE | S.H. | 18.AUG.03 | LOCATION: SYDNEY - CONTACT 0405 182 747 | |

PROJECT: JAMMA DIAGNOSTIC TOOL V1.0 DATE: 01-DEC-03

DRAWN: Steven. R. Howell

LOCATION: SYDNEY - CONTACT 0405 182 747

IP STATUS: COPYRIGHT - 2003 - NOVASAR

Title: **JAMManalyser Diagnostic Tool**

Version: 1.0b

FILE NAME: JAMMANALYZER.DDB

CAD VERSION: PROTEL 99SE (SP6)

SHEET: 1 OF 1 A2

