

# VIASYSTEMS GUANGZHOU

PCB



## VIASYSTEMS GUANGZHOU

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### CERTIFICATIONS

- ISO 9001:2000
- ISO 14001:2004
- UL 796
- ISO/IEC 17025
- TL 9000
- ISO/TS 16949:2002
- Bellcore Compliant

### PHYSICAL ATTRIBUTES

- Inner Copper Weight..... 0.5 – 5 oz
- Outer Copper Weight ..... 0.25 – 6 oz
- SMT Pitch ..... 12 mil
- Core Thickness ..... 1 – 96 mil
- Board Thickness ..... 18 – 400 mil
- PTH Aspect Ratio ..... 18:1

### CORE COMPETENCY

- High-volume Multi-layer Printed Circuit Boards
- HDI
- Backpanels

### KEY DATA

- 2,356,000 square feet
- Maximum Panel Size: 26" X 49"
- Maximum Board Thickness: 400 mil
- Aspect Ratio: 18:1
- Layer Count: 60+
- Tracks & Gaps: 3/4 (External) & 3/3 (Internal)
- Minimum Core Thickness: 1 mil
- Blind and Buried Vias
- Laser Micro Vias
- Back Drilling
- Buried Capacitance
- Edge Plating
- Controlled Impedance and Differential Impedance
- Coin Attachment
- Via Filling
- Multiple Finishes

### PROCESS CAPABILITY

- Line/Space - Print/Etch Inner Layer..... 3/3 mil
- Line/Space - External Layer..... 3/3 mil
- Impedance Control ..... ±5% (Rambus)
- Drilled Hole (min)/Buried Via..... 8 mil / 5 mil
- Laser Microvias (min) ..... 4 mil
- Solder Mask Dam ..... 2 mil for Matte Ink
- Solder Mask Dam ..... 3 mil / Glossy Ink
- Board Thickness Tolerance ..... ±8%
- Warp (mils/inch) ..... 5 mil/inch
- Internal Annular Ring ..... DHS+9
- External Annular Ring (mil) ..... DHS+9
- Hole to Edge Tolerance ..... ±5mil
- Feature to Edge Tolerance ..... ±5mil

### MATERIALS

- FR4 (Tg 140°C, 150°C and 170°C), Lead Free & tHalogen-Free Material
- Low Loss Material - Rogers, Getek, Megtron, Teflon, Nelco 4000-13, FR 408 and IS620

## GUANGZHOU

### SURFACE FINISHES

- HASL
- OSP & HT OSP
- Immersion Silver
- Immersion Tin
- Hard Gold Tab
- Immersion Gold
- Deep Tank Hard Gold & Soft Gold
- Carbon Ink
- LFHASL

### SOLDER MASK

- Taiyo, Tamura, Nanya, Probimer, Enthone

### TEST EQUIPMENT

- AOI - Orbotech/Camtek AOI Machine
- E-Test - Sink/OS/Mason E-Tester  
- Mania/Everett Charles Universal E-Tester  
- ATG E-Tester, Nidec Read Fine Pitch E-Tester  
- ATG and MicroCraft Emma Fly Probe Tester
- Lab. Testing - Cross-section  
- SIR, CAF  
- PerfecTest  
- Xact PC  
- SEM/EDAX  
- IST and Thermal Cycling

### CAD/CAM

- Orbotech/Valor Workstation
- Orbotech Laser Plotter
- Barco Large Format Laser Plotter

### CAPACITY

- Inner Capacity: 820,000 square feet per week
- Outer Capacity: 430,000 square feet per week

### MANUFACTURING EQUIPMENT

- Board Cutting - Schelling and ACS Auto Sawing Machine
- Inner D/F - Morton Laminator & Hakuto Laminator  
- AutomaTech Auto Exposer Machine, C'Sun & ORC Exposer Machine
- DES - MacDermid Schmid, Hollmuller DES Line and Multi-line OPE
- Black Oxide - Conventional Black Oxide Line with MacDermid/Rohm & Hass Chemical
- Lamination - Burkle Pin Lamination Machine  
- Mass Lamination with Seiko Bonding Machine  
- Cedal Optical Fusion Bonding  
- Multi-line OPL
- Drilling - Pluritec, Muraki and Multi-line Optimizer  
- Hitachi/Excellon/Pluritec/Schmoll Drilling Machine  
- Laser Drilling- Lumonics Laser Drilling Machine (UV+CO2), Hitachi (UV + CO2), Excellon Cobra (UV + CO2), Mitsubishi (CO2)
- Outer D/F - Hakuto Laminator  
- Hakuto & AutomaTech Auto Exposure Machine
- SES - MacDermid/Hollmuller SES Line
- Solder Mask - Group Up Electrostatic Spray Coating Machine  
- ORC Auto Exposure Machine
- HASL - HALCO & CEMCO HASL Machine
- LFHASL - Cemco
- Profiling - Posalux/Hitachi Routing Machine  
- NCV-600/Schmoll V-cut Machine
- Coin Attachment- Electrovert Barvo Reflow Oven
- Plating
- PAL Pulse Plating Line