



TECHWISE FOGANG(TSF)



TECHWISE Shirai(Fogang) Circuits Limited

Kingboard Industry Park, Shi Jiao Town, Fogang Country, Qing Yuan, Guangdong Province, China

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CORE COMPETENCY

- ▶ **High-volume Double-layer and Multi-layer Printed Circuit Boards**

KEY DATA

- ▶ 12,000,00 square feet
- ▶ Maximum Panel Size: 24" × 35"
- ▶ Maximum Board Thickness: 200 mil
- ▶ Aspect Ratio: 10:1
- ▶ Layer Count: 4(pressing)
- ▶ Tracks & Gaps:
 - 3/3mil (External) & 3/3 mil (Internal)
- ▶ Minimum Core Thickness:
 - 2.5 mil (ex copper)
- ▶ Blind and Buried Vias
- ▶ Back Drilling
- ▶ Controlled Impedance and Differential Impedance
- ▶ Multiple Finishes
- ▶ Edge Plating



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CERTIFICATIONS

- ▶ ISO9001
- ▶ UL 796
- ▶ ISO/TS16949
- ▶ ISO14001
- ▶ ROHS

PHYSICAL ATTRIBUTES

- ▶ Inner Copper Weight0.25-6oz
- ▶ Outer Copper Weight0.25-6oz
- ▶ SMT Pitch12 mil
- ▶ Core Thickness.....2.5- 96 mil
(ex copper)
- ▶ Board Thickness5-280 mil
- ▶ PTH Aspect Ratio10:1

CAD/CAM

- ▶ Orbotech Workstation
- ▶ Orbotech Laser Plotter

CAPACITY

- ▶ Inner Capacity: 200000 square feet per month
- ▶ Outer Capacity: 1200000 square feet per month

PROCESS CAPABILITY

- ▶ Line / Space
 - Print / Etch Inner Layer.....3/3mil
 - External Layer.....3/3mil
- ▶ Impedance Control.....8%
- ▶ Drilled Hole(min)/Buried Via.8mil
- ▶ Solder Mask Dam..2 mil for Matte Ink
..... 3 mil for Glossy ink
- ▶ Board Thickness Tolerance8%
- ▶ Warp 0.7% (min)
- ▶ Internal Annular RingDHS+10mil
- ▶ External Annular ring.....DHS+10mil
- ▶ Hole to Edge Tolerance±5mil
- ▶ Feature to Edge Tolerance ±5mil

MATERIALS

- ▶ FR4 (Tg 140°C, 150°C and 170°C), Lead Free and Halogen-Free Material
- ▶ CEM-3
- ▶ Low Loss Material - Rogers Getek, Teflon, BT, FR 408 and IS620
- ▶ Aluminum/steel base



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SURFACE FINISHES

- ▶ HASL
- ▶ OSP & HT OSP ▶ Immersion Silver
- ▶ Immersion Tin
- ▶ Immersion Gold
- ▶ Deep Tank Hard Gold & Soft Gold
- ▶ Carbon Ink ▶ Peelable mask.

SOLDER MASK

- ▶ Taiyo, Tamura, Probimer, Greentop, Coates

TEST EQUIPMENT

- ▶ AOI
 - Orbotech/Screen AOI Machine
- ▶ E-Test - Mason E-Tester, Kaima E-Tester
 - ATG E-Tester,
 - ATG and MicroCraft Emma Fly Probe Tester
- ▶ FQC-Final Inspection Machine
- ▶ Lab. Testing
 - Cross-section
 - PerfectTest
 - IST and Thermal Cycling

PROCESS CAPABILITY

- ▶ Line / Space
 - Print / Etch Inner Layer.....3/3mil
 - External Layer.....3/3mil
- ▶ Impedance Control.....8%
- ▶ Drilled Hole(min)/Buried Via.8mil/5mil
- ▶ Laser Microvias (min).....4mil
- ▶ Solder Mask Dam..2 mil for Matte Ink
..... 3 mil for Glossy ink
- ▶ Board Thickness Tolerance8%
- ▶ Warp 0.7% (min)
- ▶ Internal Annular RingDHS+10mil
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CORE COMPETENCY

- ▶ Board Cutting : ACS Auto Sawing Machine
- ▶ Inner D/F : BURKLE Roller Coating Laminator
UVE-M720 Exposer Machine
- ▶ DES : AMPOC DES Line
- ▶ BROWN Oxide : UCE Oxide Line
- ▶ Lamination : Mass Lamination Hequar
- ▶ Drilling : Mark/SO2/ Excellon/ Pluritec Machine
- ▶ Outer D/F : C-SUN/ HAKUTO laminator
C'Sun Exposure Machine
- ▶ SES : UCE SES Line
- ▶ Solder Mask : SEMI AUTO Printing Machine
C'Sun& ORC Exposure Machine
- ▶ HASL : Vertical HAL Machine
- ▶ Profiling : CNC Routing Machine (TL/MAXIMA)
SHODA /NCV-600/SCHMOLL V-CUT Machine