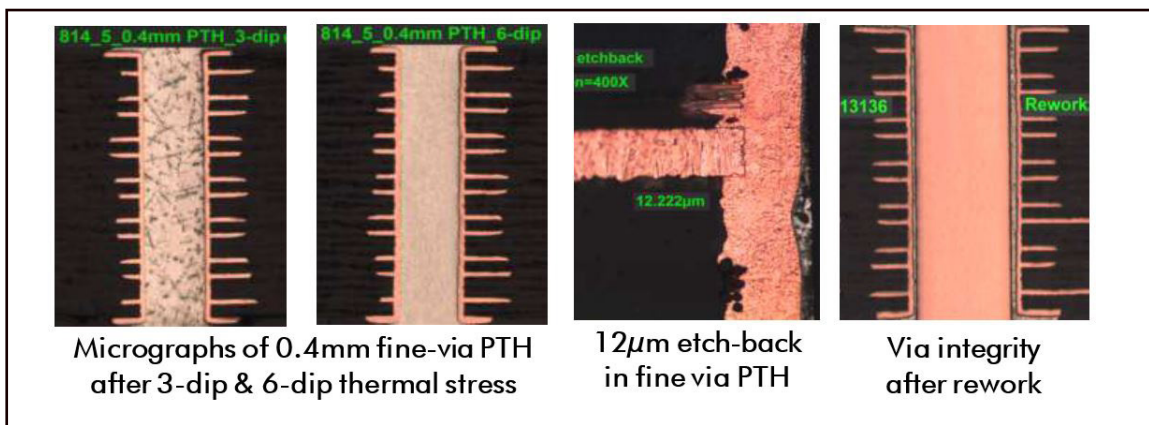


Fine-via PCB Technology for high-pin Count FPGA Devices

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the technology for PCBs with fine electrical vias / plated through holes (PTH) of 0.40 mm finished diameter to cater for high pin count / fine pitch FPGA devices in various subsystems using complex high layer count multilayer PCB designs required for electronics packaging applications in multiple Satellites.



Salient Features & Major Specifications

- ✦ Laminate material : High-Tg FR4
- ✦ Total PCB Thickness : 2.25 mm ± 0.15 mm
- ✦ Minimum through hole size : 0.40 mm (16 mils) finished
- ✦ Minimum drilled hole size : 0.50 mm diameter
- ✦ Standard through hole size : 0.80 mm (32 mils) finished
- ✦ Minimum pad diameter : 1.0 mm (40 mils) by design
- ✦ Standard hole pad diameter : 1.5 mm (60 mils) by design
- ✦ Minimum Trace width : 0.125 mm (5 mils) by design
- ✦ Minimum spacing : 0.100 mm (4 mils) by design
- ✦ Minimum Dielectric separation : 100 µm (4 mils)
- ✦ Outer layer basic copper : ½ oz (17.5 microns)
- ✦ Outer layer Copper thickness : 52.5 (± 10) µm (External) finished

- ✦ Inner layers Copper thickness : 30 (\pm 05) μ m, Internal
- ✦ Multilayer Construction : Laminate type construction
- ✦ Fabrication Technique : Subtractive type, Electroless Copper, SMOBC
- ✦ Solder mask material : Electra EMP110, Carapace
- ✦ Surface finish : Eutectic Solder (Sn-63 / Pb-37)

Technology Transfer

URSC/ISRO offers to transfer this technology of Fine-via PCB Technology for high-pin Count FPGA Devices to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),
Programme Planning and Evaluation Group (PPEG),

📍 U R Rao Satellite Centre (URSC), ISRO, HAL Airport Road,
Vimanapura Post, Bangalore – 560 017.

✉ Email-id: tt-icd@ursc.gov.in

☎ Fax No: 080-25205261

🌐 <https://www.ursc.gov.in/industry/index.jsp>