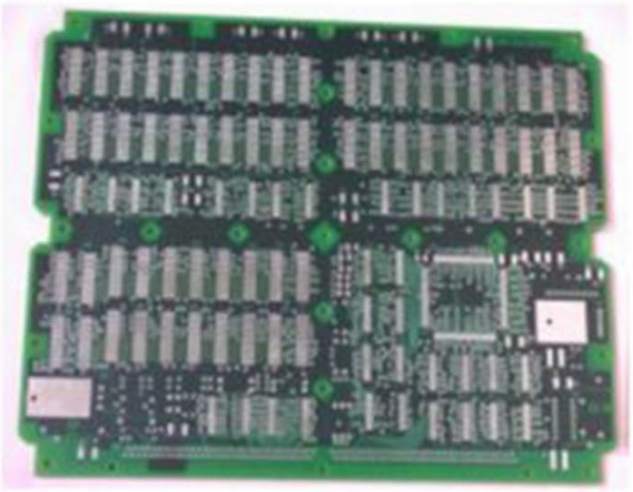
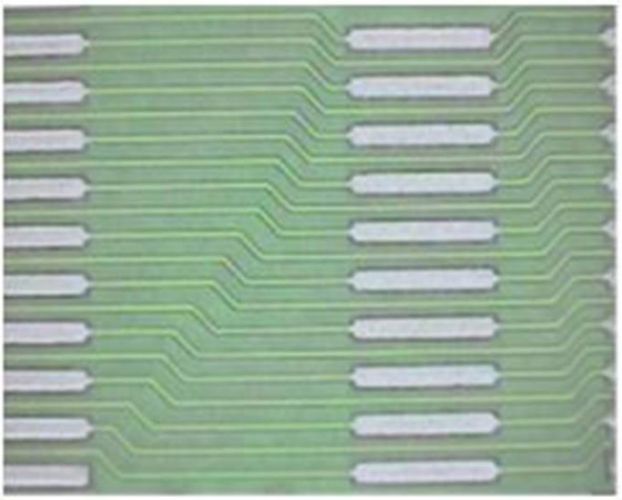
Fine Line PCB Technology for Fine-Pitch Surface Mount Devices

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has develop and qualify the technology for PCBs with fine conductor features of 5 mil trace width and 4 mil spacing to cater for various fine pitch surface mount devices in the Solid-State Recorder (SSR) packages of high-resolution imaging LEO Satellites.



Fine Line SSR Multiplayer PCB Replaced 6 Normal MLBs



Fine Lines Replaced with Liquid Photoimageable Resist

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 (± 05) µm, 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 from ISRO

ISRO is willing to offer the knowhow of this technology to suitable entrepreneurs / industries in India. Capable manufacturing industries interested in acquiring this knowhow may write with details of their present activities, requirements and plans for implementation, infrastructure and technical expertise available with them, their own market assessment, if any, and plans for diversification to the address given below: