Continuous E-less Cu Plating+ Flash Cu Plating Process
ELF Process

＊Patent pending

We will introduce "ELF Process" which is optimized process for Micro Via, Stack Via etc. with continuous E-less Cu + Flash Cu Plating

Electro-**L**ess Copper + **F**lash Copper Process ＝ **ELF** Process

*Plating thickness: E-less Cu plating:0.1~0.2um, Flash Cu Plating:0.8~0.9um

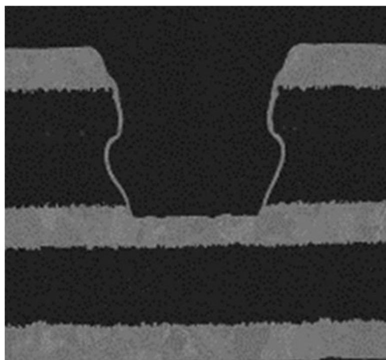
【Feature of ELF Process】

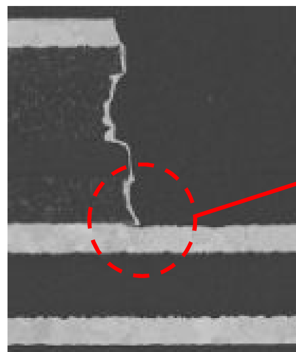
- Good performance for Both sided Via by Vertical conveyor system
- Improved Covering performance for Micro Via, Stack Via, TH etc.
- Remarkably improved yield with HA foil response processed
- Remarkably improved reliability and yield with 1.0um plating layer

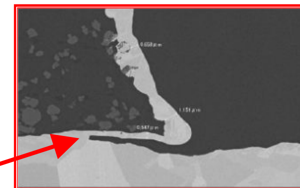
・Examples of treatment

3 layer FPC Via hole (Via dia.: 50um, Via depth: 39um)

Structures of Via wall: Cu/PI/BS/Cu, and Cu/PI/BS/PI/Ad/Cu







Remarkably improved covering performance

After treated E-less Cu plating 0.1um + Flash Cu plating 0.9um

View of Eq. (RTR-type ELF Process Eq. **FPCC property**

- **Atmospheric Plasm cleaning is standard feature in process**
- **Feed in/out system can apply both Vertical and Horizontal-type**
- **Allowing visitors to view RTR& SBS operation at any time except customer's evaluation time**

・Evaluation Test are taken as needed!

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