



## Excellence Electronic Co, Ltd Fabrication Capability

| Categories                           | Descriptions  | Fabrication Capability                                      |
|--------------------------------------|---|---|
| Panel Size                           | Maximum panel size  | 27.56"X23.23"(700mm x 590mm)~double sided                   |
|                                      |   | 27.56"X21.65"(700mm x 550mm)~multilayer                     |
| Board thickness                      | Standard thickness  | 2L : 16mil(0.4mm) ; 4L : 16mil(0.4mm) ; 6L : 20mil(0.5mm)   |
|                                      | Maximum thickness   | 157mil(3.99mm)  |
|                                      | Tolerance   | ±10% ( Complied with IPC standard)                          |
| Material                             | Rogers(RO3000 series, RO4000 series) 、 Panasonic Megtron 6 、 FR-4(High TG180 、 High Tg 200 Halogen Free ) 、 ISOLA(FR408 、 370HR) 、 TEFLON 、 NELCO 、 Aluminum(single double sided) |   |
| Bowing                               | Standard  | 7/1K(IPC standard 7.5/1K)                                   |
| Layers                               | Maximum layer   | 26 Layers   |
|                                      | Minimum inner-layer(without copper)   | 0.003" (0.07mm)   |
| Mechanical Drill                     | Minimum mechanical drill diameter   | 5.9mil用於39mil thickness(1mm)(aspect ratio 6.6)              |
|                                      |   | 7.8mil用於62mil thickness (1.6mm)(aspect ratio 8)             |
|                                      |   | 9.8mil用於125mi thickness (3.2mm)(aspect ratio12.7)           |
|                                      | Maximum mechanical drill diameter   | 0.25" (6.4 mm)  |
|                                      | Drill hole tolerance  | ±0.002" (0.050mm)   |
|                                      | PTH diameter tolerance  | ± 0.003" (0.075mm)  |
|                                      | N-PTH diameter tolerance  | ±0.002" (0.050mm)   |
|                                      | Annual ring clearance   | ±0.005" (0.127mm)   |
|                                      | Minimum epoxy Via Plug hole diameter  | 4mil(We could do various hole diameter for expoxy via plug) |
|                                      | Minimum distance of via to via with epoxy via plug  | 10mil ↑   |
|                                      | Minimum distance between via and impedance trace  | 6mil  |
| Minimum distance between via and via | 9.8mil(0.25mm)  |   |
| Laser Drill                          | Minimum laser drill diameter  | 4-5mil  |
| Back Drill                           | Tolerance   | ± 3 mil   |
| PTH                                  | Minimum drilling hole diameter  | 0.004" (0.1 mm)   |
|                                      | Aspect ratio  | 14  |
| Etching                              | Line width tolerance  | ±15%  |
|                                      | Minimum Line Width and Spacing (Hoz)<br>Copper 1/3oz  | 0.003"/ 0.003" (0.05mm)                                     |
|                                      | Minimum Line Width and Spacing (1oz)<br>Copper 1/2oz  | 0.004"/ 0.004" (0.127mm)                                    |
|                                      | Minimum Line Width and Spacing (2oz)  | 0.007"/ 0.007" (0.18mm)                                     |
|                                      | Minimum Line Width and Spacing (3oz)  | 0.008"/ 0.008" (0.2mm)                                      |
|                                      | Minimum Line Width and Spacing (4oz)  | 0.012"/ 0.012" (0.3mm)                                      |
| Inner Layer                          | Minimum clearance between hole and inner trace  | 0.006" (0.15mm)   |
|                                      | Minimum Line Width and Spacing (Hoz)<br>Copper base1/3oz  | 0.003"/ 0.003" (0.05mm)                                     |
|                                      | Minimum Line Width and Spacing (1oz)<br>Copper base1/2oz  | 0.004"/ 0.004" (0.10mm)                                     |
|                                      | Minimum Line Width and Spacing (2oz)  | 0.007"/ 0.007" (0.18mm)                                     |
|                                      | Minimum Line Width and Spacing (3oz)  | 0.008"/ 0.008" (0.2mm)                                      |
|                                      | Minimum Line Width and Spacing (4oz)  | 0.012"/ 0.012" (0.3mm)                                      |



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|                     |   |  |
|---------------------|---|--|
| Solder Mask         | Colors  | Green, light green, matte green, white, black, yellow, red, blue, transparent      |
|                     | Minimum space for solder mask dam   | 0.003"   |
|                     | Solder Mask thickness   | Standard : 0.0004"<br>Base on customer request 500VDC · 1000VDC · 1500VDC · 2000VD |
|                     | Tolerance   | 50um±25%   |
| Legend (Silkscreen) | Colors  | white, black, yellow   |
|                     | Minimum line width  | 0.005" (0.127mm)   |
|                     | Minimum legend height & width   | 0.028" / 0.028" (0.07mm)   |
| Impedance           | Tolerance   | Single ended /differential /coplanar impedance +/- 10%                             |
| Contour             | Reaming   | ±0.006" (0.15mm )  |
|                     | CNC tolerance   | ±0.006" (0.1mm)  |
|                     | V-Cut Depth (board thickness > =1.0mm )                                     | ±0.004" (0.1mm)  |
|                     | V-Cut tolerance   | ±0.004" (0.1mm)  |
|                     | Semi-circular hole  | Yes  |
| Surface finishing   | We could do two surface finishing on PCB                                    | HASL/ENIG /ENEPIG/Immersion silver/Immersion tin/OSP/electric gold plating         |
| Blind Buried via    | 4+N+4 · Resin epoxy via plug Ink via plug via on pad                        | Yes  |
| Golden Finger       | Golden finger gap tolerance   | 4mil±2mil  |
|                     | Golden finger to board side tolerance                                       | ±4mil(0.1)   |
|                     | Size  | Legth : 3mm ; Width : 0.6mm IPC standard±20%                                       |
|                     | Special fabrication   | Golden finger w/o conductor  |
| Unique Fabrication  | Embedded copper coin, copper paste via plug                                 |  |
| Remark              | Please inform us with other special request, we will assist to evaluate it. |  |