# Parameter of flexible circuit boards in the Flex Pool

## Base material

Printed circuit boards in the Flex Pool are manufactured from Polyimide films.
The 1- or 2-layer flexible printed circuit boards have a material thickness of 0.2 mm.
The copper thickness amounts to 18 microns, the thickness of Polyimide to 50 microns.

| Property | Polyimide |
|---|---|
| Initial Tear Strength | 500 g |
| Flexural strength | ≥ 10000/cycle* |
| Copper adhesion | ≥ 0,70 N/mm² |
| Dielectric Constant | ≤ 3,7 (1,1 GHz) |
| Withstand solder bath (°C) | 288°C (> 10 s) |
| Moisture absorption | ≤ 3 % |
| Expansion | ± 0,20 % |

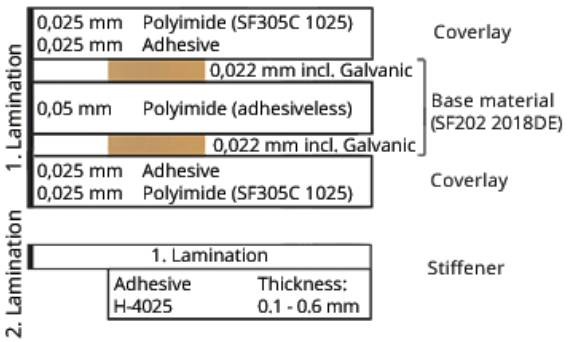
* IPC-TM 650/2.4.3

## Technical Parameters

| | |
|---|---|
| Number of layers | 1-2 |
| Copper | Single-sided or double-sided |
| Surface | ENIG |
| Film material | Polyimide |
| Polyimide thickness | 50 µm |
| Copper thickness | 18 µm |
| Circuit board thickness | 0.2 mm |
| Max. size of the circuit board | Length: 400 mm<br>Width: 250 mm |
| Min. size of the circuit board | Length: 10 mm /<br>Width: 10 mm |
| Flex cover film | Clearance: ≥ 200 µm |
| Min. conductor width / conductor clearance | 125 µm |
| Vias | via diameter ≥ 200 µm |
| Min. via-via spacing | 450 µm |
| Min. milling radius | 100 µm |
| Min. copper-contour clearance | 200 µm |
| Milling tolerance | +/- 100 µm |
| Silkscreen | both sides |

## Layer Stackup Flex Pool

**Layer: 2**
**Thickness: 0,2 mm without stiffener**




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