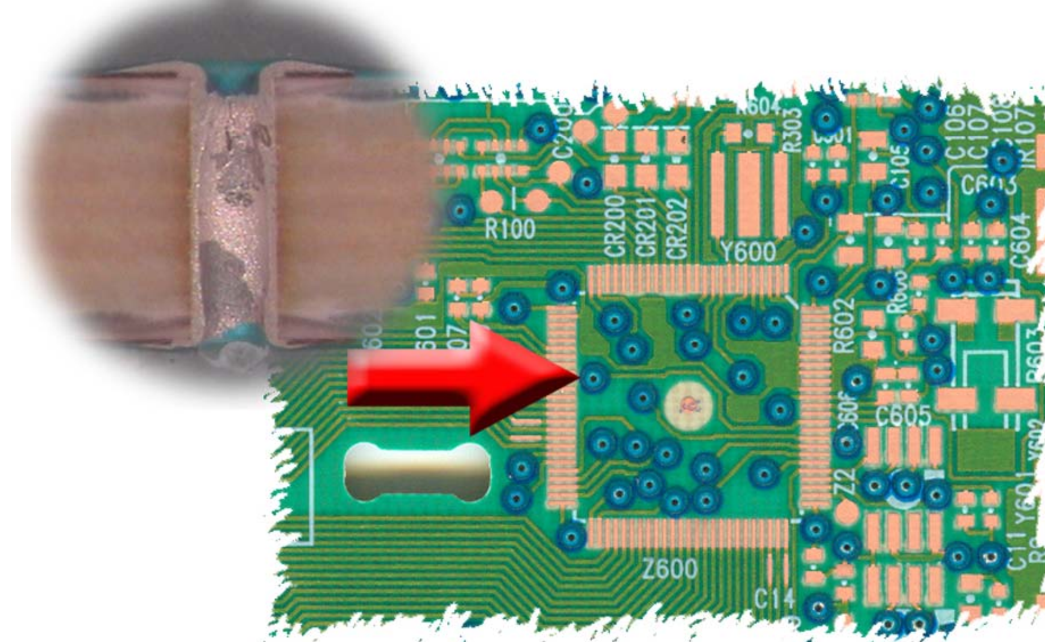
eurocirsa

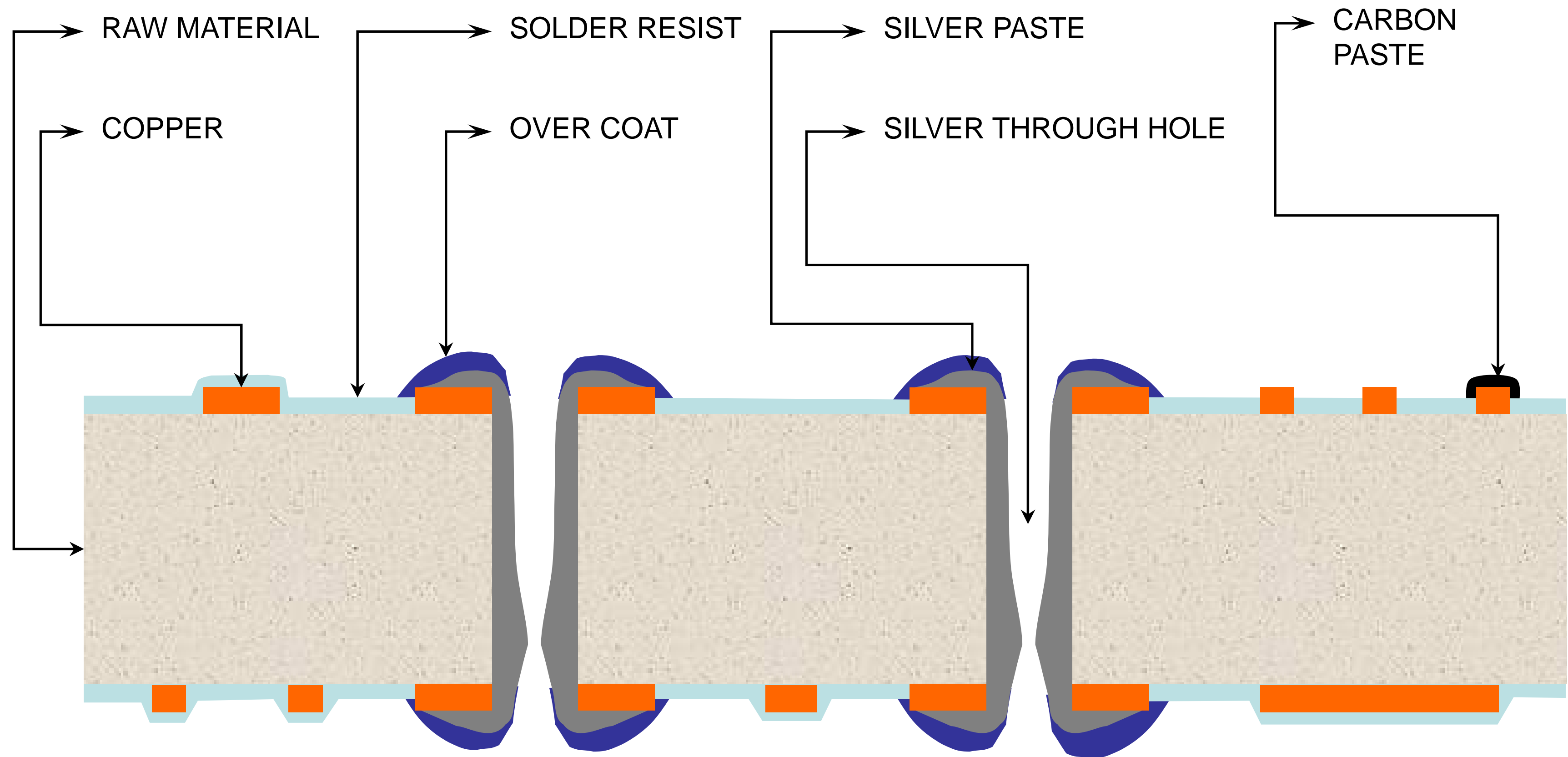
GUIDE LINES FOR STH PCB TECHNOLOGY

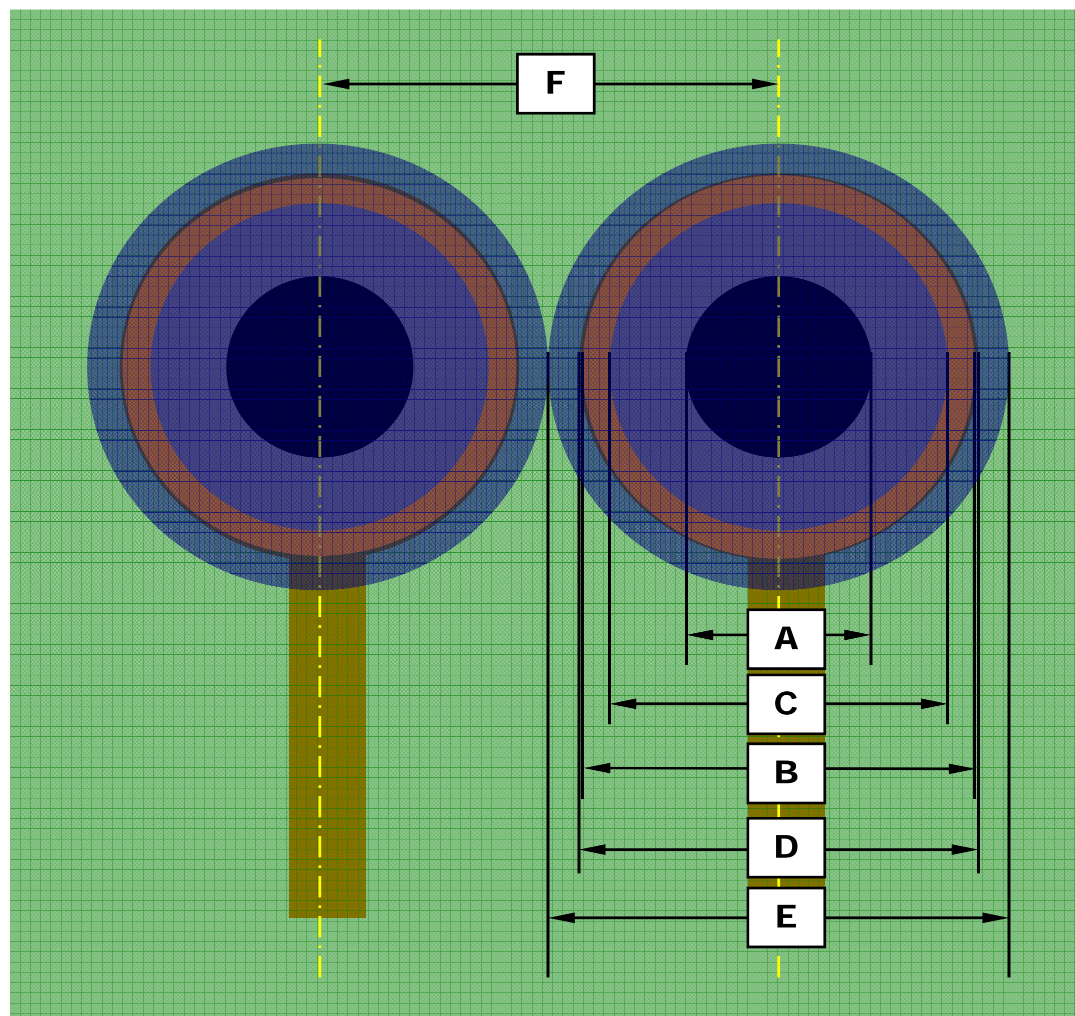


TECHNICAL DESIGN RULES

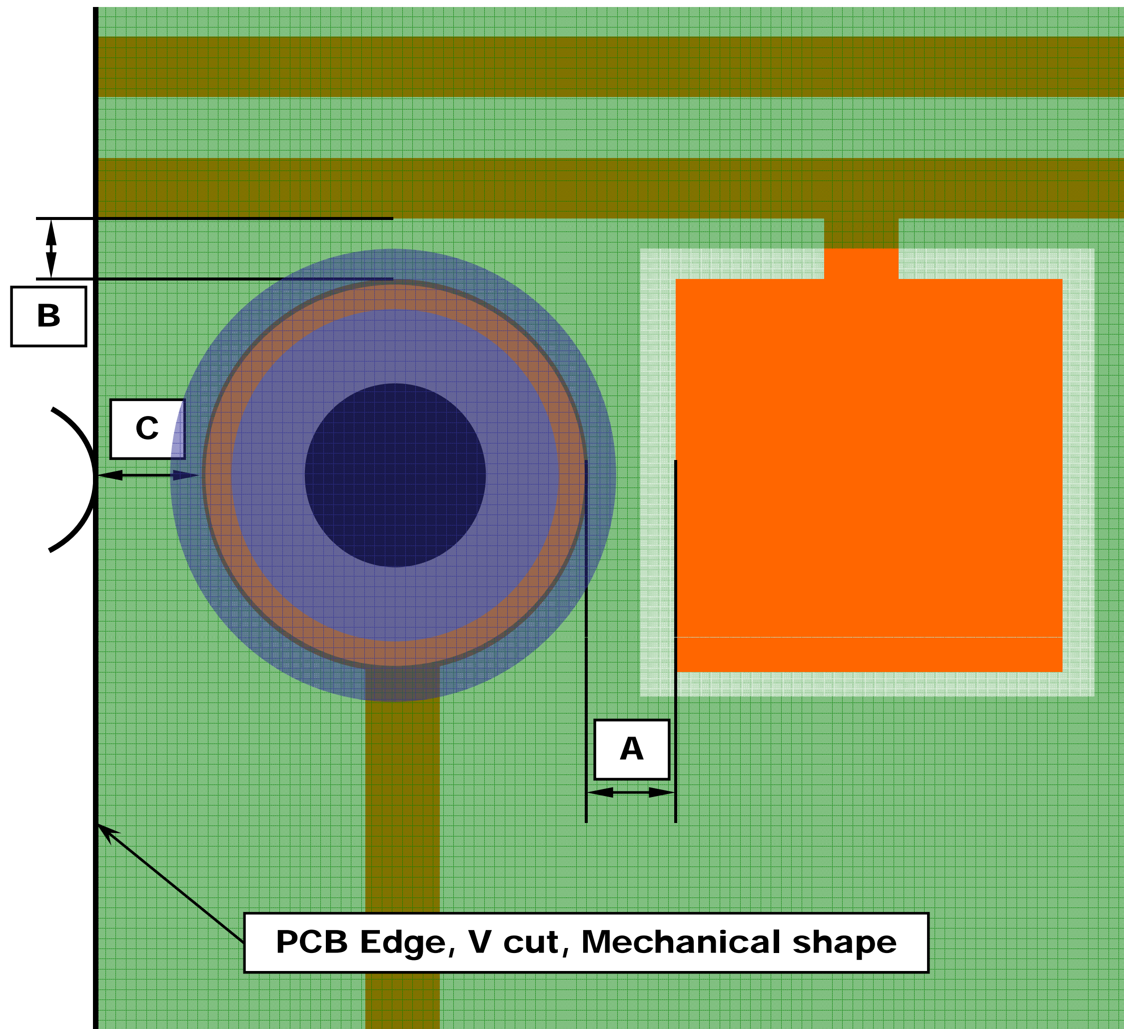
eurocirsa

GRAPHICAL SECTION





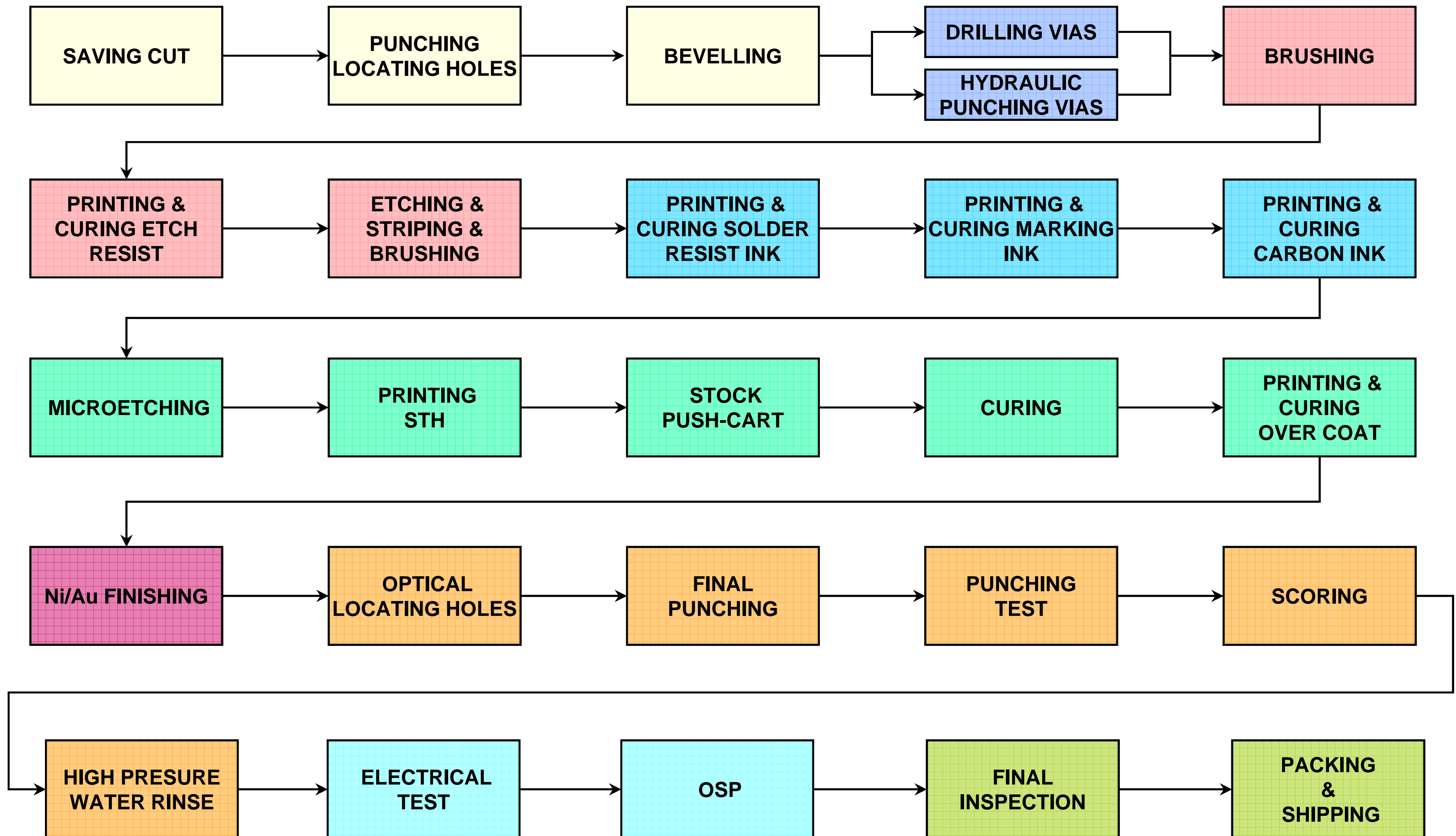
MINIMUN DIMENSIONS		
CODE	**DESCRIPTION**	**DIMENSION (mm)**
A	HOLE	0,7
B	SOLDER RESIST	1,4
C	SILVER LAND	1,2
D	COPPER LAND	1,4
E	OVER COAT	2
F	PITCH	1,7



MINIMUN DIMENSIONS		
CODE	DESCRIPTION	DIMENSION (mm)
A	Between Land STH & Pad SMD	0,4
B	Between Land STH & Track pattern	0,35
C	Between Land STH & Mechanical shape	1,5

eurocirsa

FLOW CHART PROCESS



Manufacture possibilities

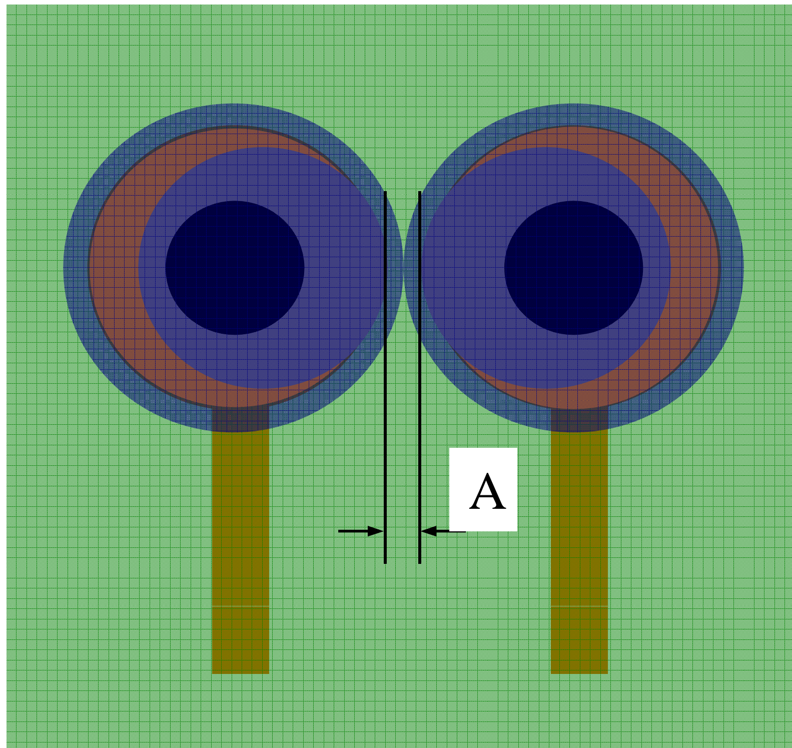
- Raw material
  - ANSI grade
    - CEM-3, CEM-1, FR-1
  - Thickness
    - 1.0 ÷ 1.6 mm
  - Copper thickness
    - 35 µm
- Lay out
  - Screen printing + UV curing
- Solder resist
  - Screen printing + UV curing
- Silver paste
  - Screen printing + hot air oven

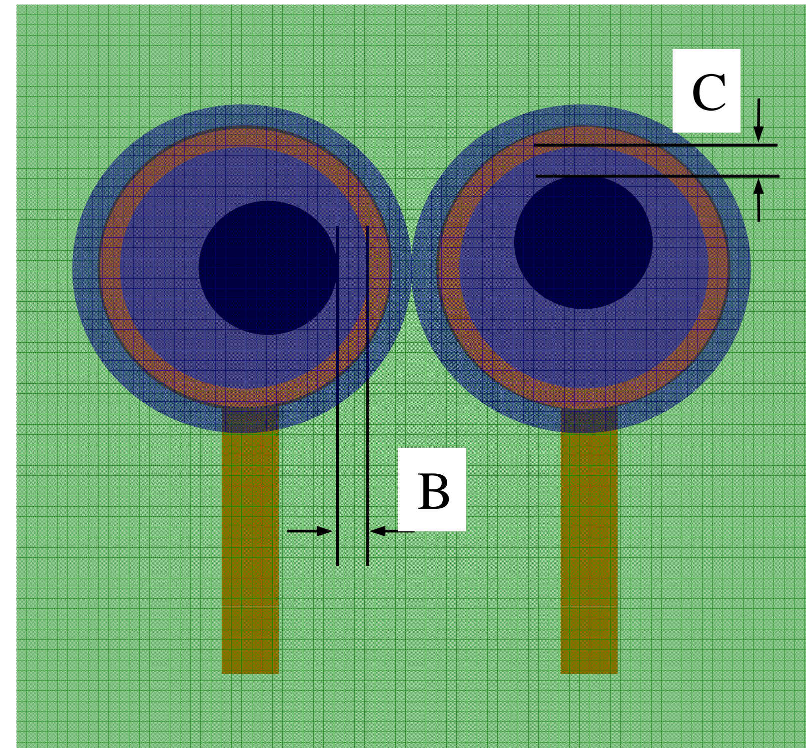
eurocirsa

Technical specifications

- **Electrical**
  - **Resistance**
    - **≤ 50 mΩ / Hole**
  - **Current Capacity**
    - **> 500 mA / Hole**
- **Enviromental**
  - **Humidity**
    - **40±2°C / 90÷95%RH / 500 hours** — **≤ 80m Ω / Hole**
  - **High Temperature**
    - **100±2°C / 500 hours** — **≤ 80 m Ω / Hole**
  - **Temperature Cycle Test**
    - **{(40±5°C / 30 min) + (100±5°C / 30 min)} x 10** — **≤ 80 m Ω / Hole**
  - **Soldering Temperature**
    - **(260±5°C / 5 sec) x 3 cycles** — **≤ 80 m Ω / Hole**

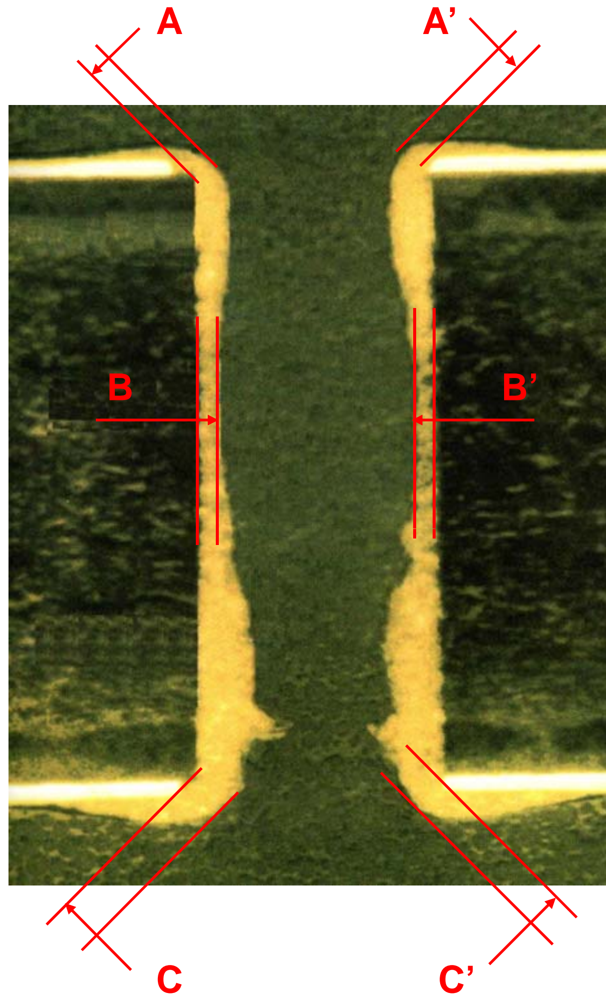
- **Life Test**
  - **Humidity**
    - **40±2°C / 90÷95 % RH**
    - **(500mA / 90 min + 0 mA / 30 min) x 500 h** **≤ 80 m Ω / Hole**
  - **High Temperature**
    - **70±2°C**
    - **(500 mA / 90 min + 0 mA / 30 min) x 500 h** **≤ 80 m Ω / Hole**
- **Mechanical**
  - **Adherence**
    - **Tesa Tape** **OK**
  - **Bending**
    - **Specimen 100 mm long**
    - **Bend ± 3 mm up&down x 10 times** **≤ 50 m Ω / Hole**





<table>
<tr><td rowspan="5">MAXIMUM MISREGISTRATION ALLOWED</td><td colspan="3">MINIMUM DIMENSION</td></tr>
<tr><td>CODE</td><td>DESCRIPTIOPN</td><td>DIMENSION</td></tr>
<tr><td>A</td><td>CLEAR AREA BETWEEN SILVER</td><td>0.2 mm</td></tr>
<tr><td>B</td><td>HOLE TO SILVER</td><td>0.2 mm</td></tr>
<tr><td>C</td><td>HOLE TO SILVER</td><td>0.2 mm</td></tr>
</table>

Microsection by IPC-TM-650, method 2.1.1. after solder dip 260±5°C / 5 sec.



MINIMUM DIMENSION		
A / A'	B / B'	C / C'
20 µm	10 µm	25µm