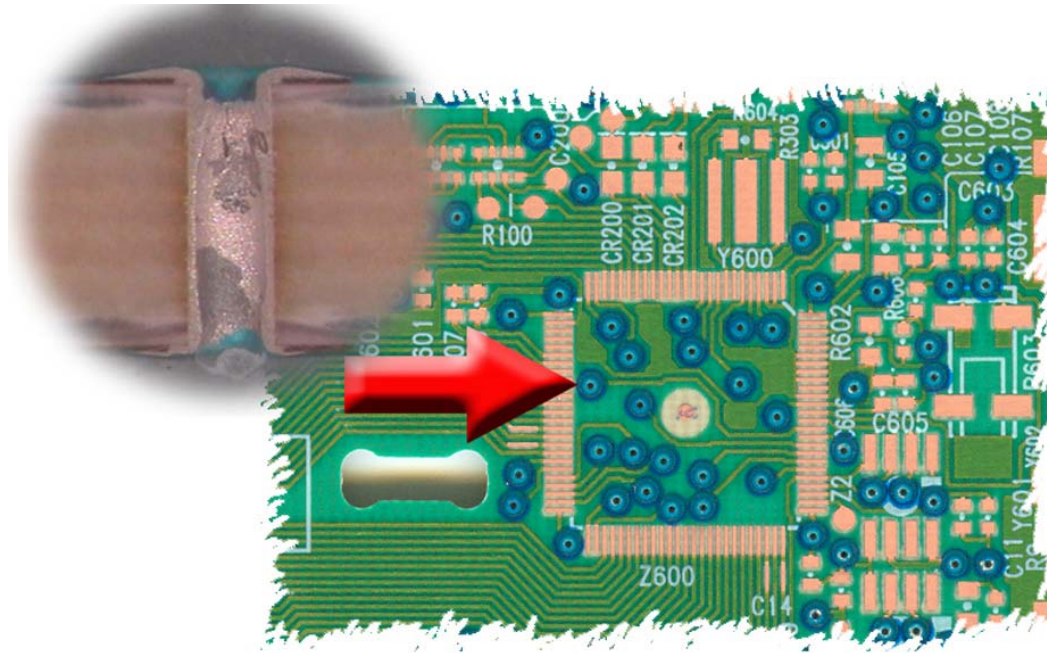
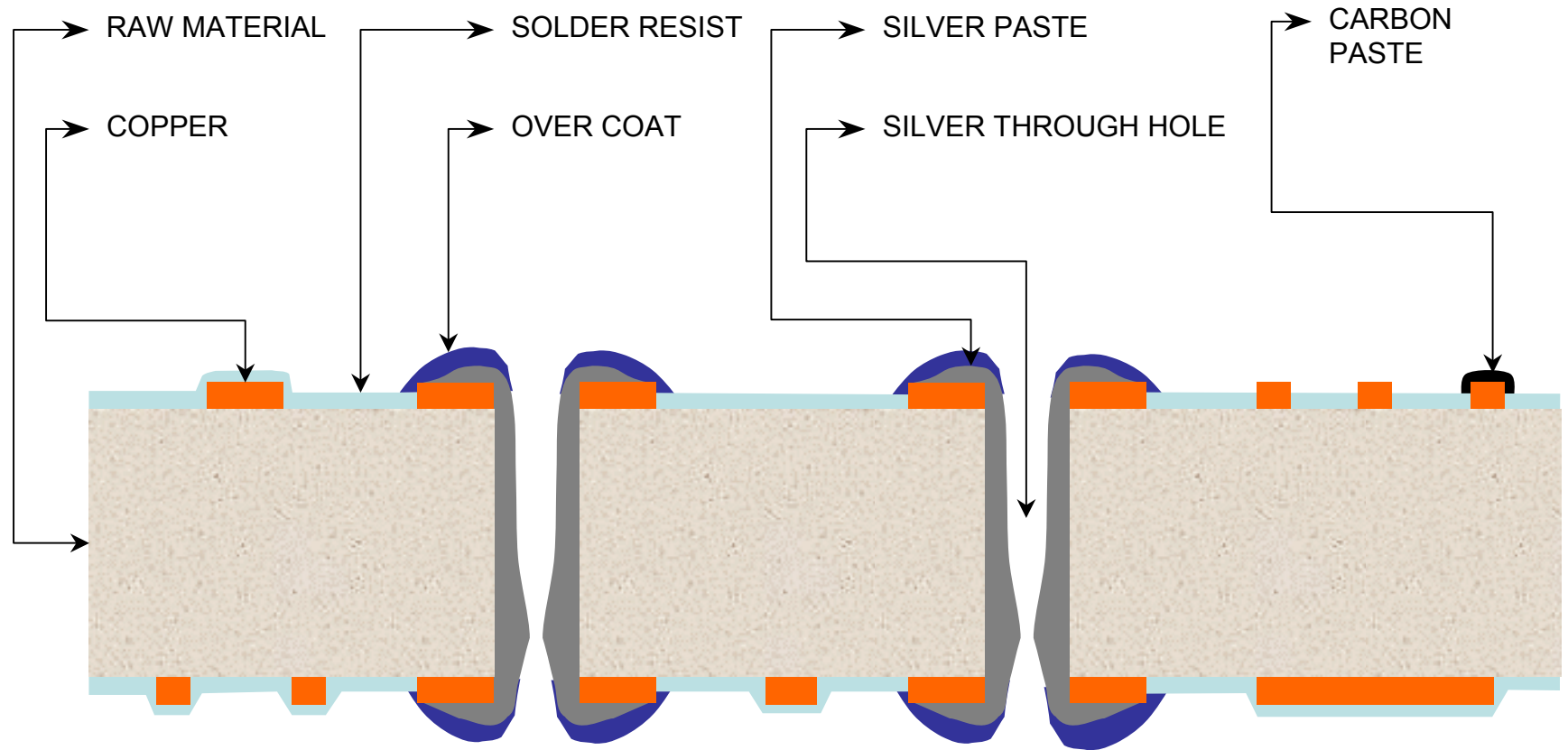
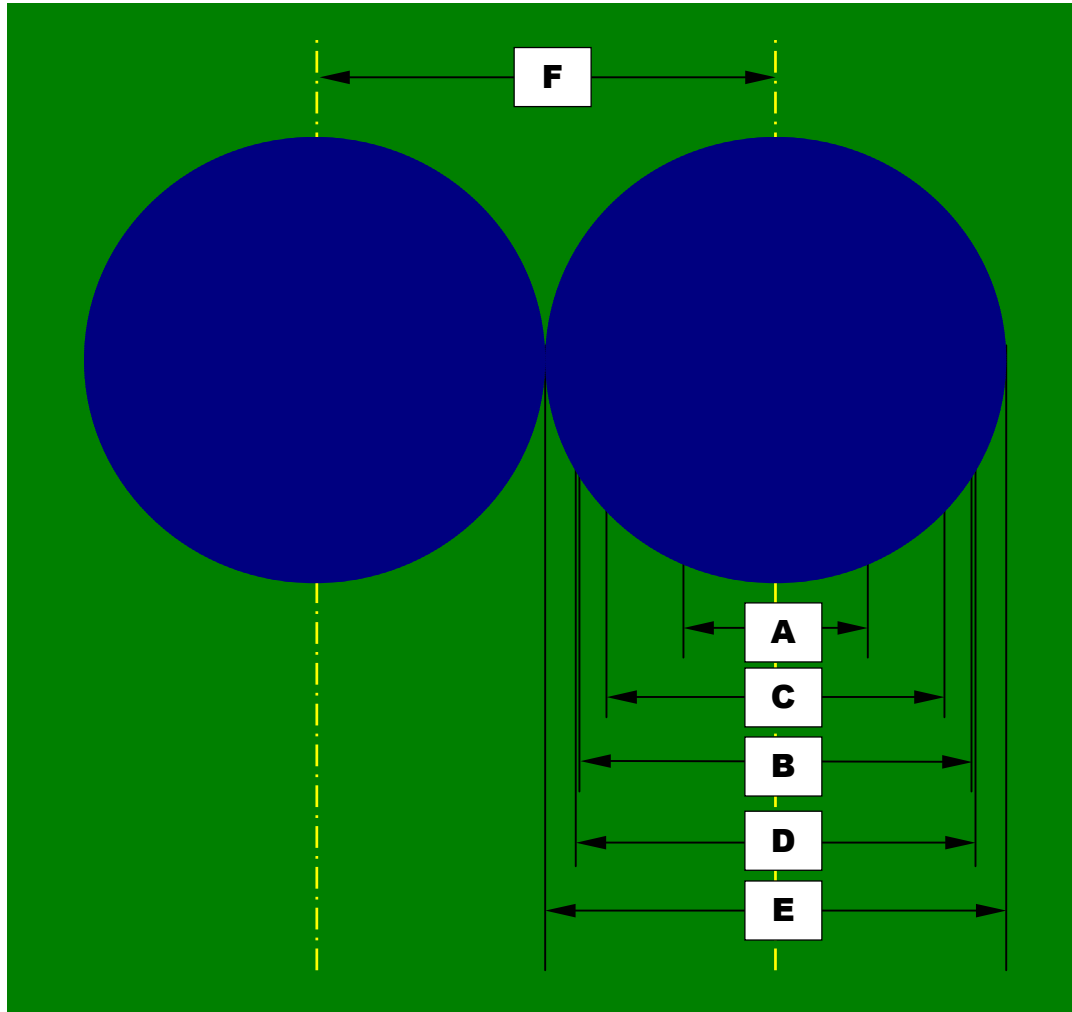


GUIDE LINES FOR STH PCB TECHNOLOGY

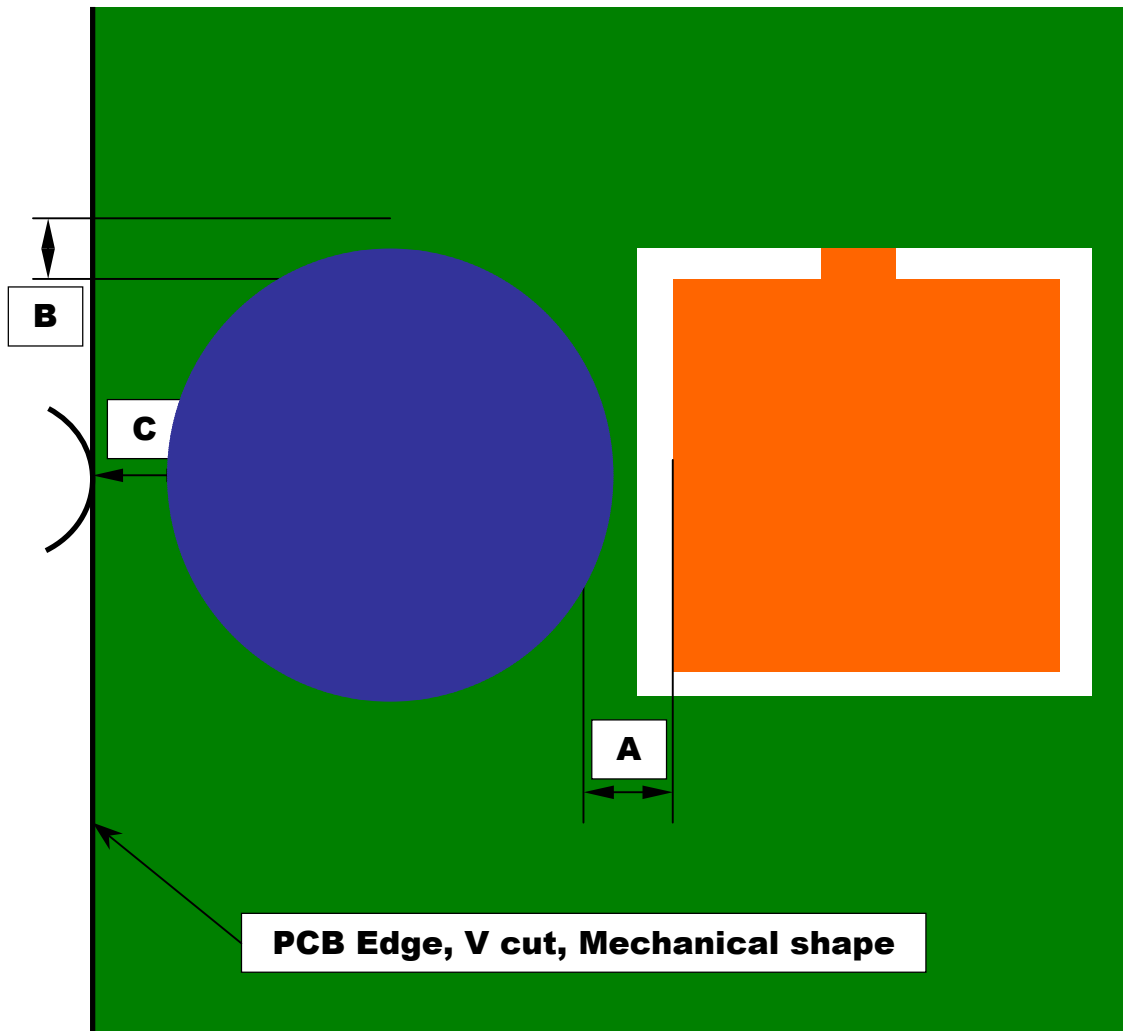


TECHNICAL DESIGN RULES

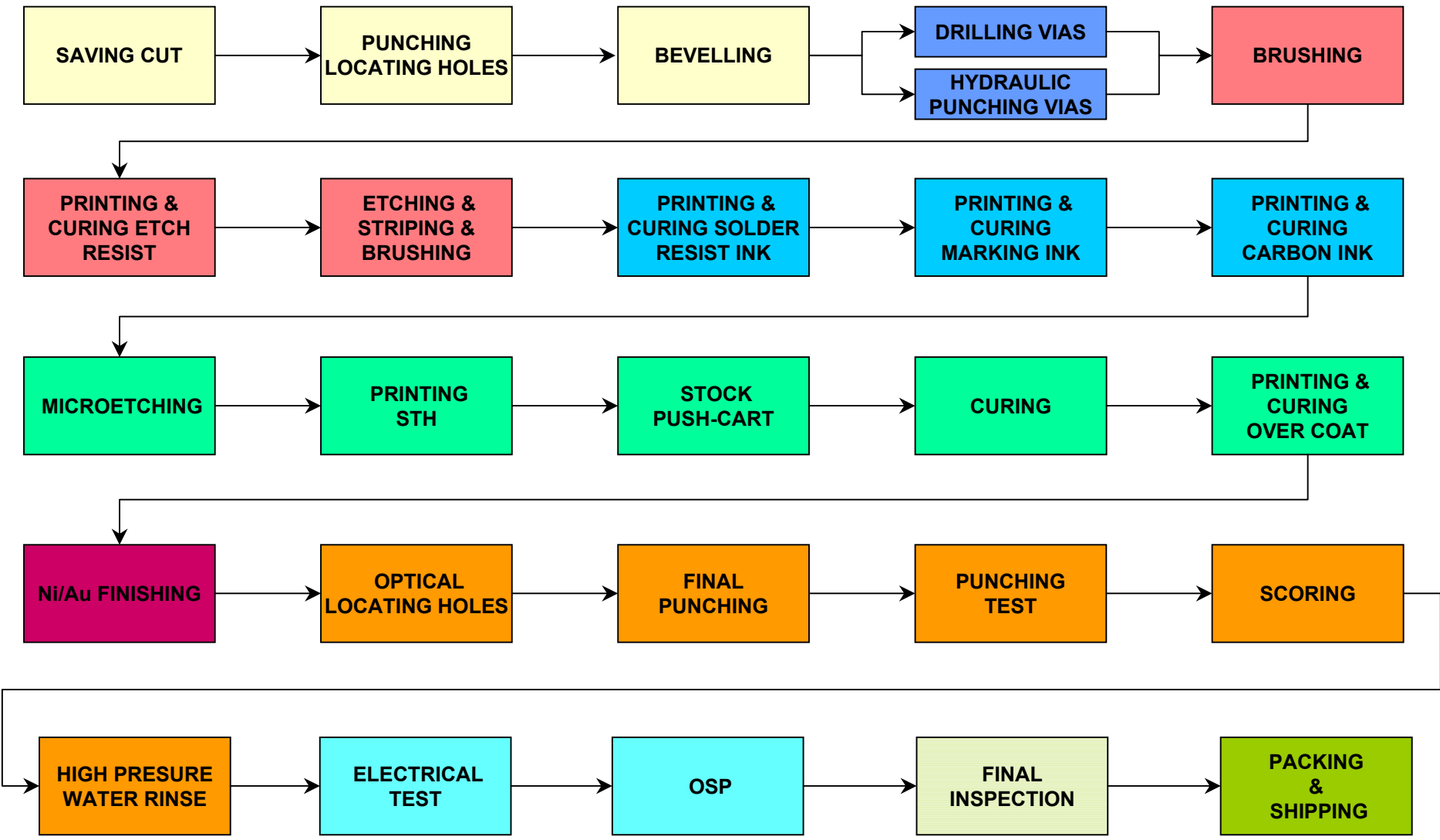




MINIMUM DIMENSIONS		
CODE	DESCRIPTION	DIMENSION (mm)
A	HOLE	0,7
B	SOLDER RESIST	1,4
C	SILVER LAND	1,2
D	COPPER LAND	1,4
E	OVER COAT	2
F	PITCH	1,7



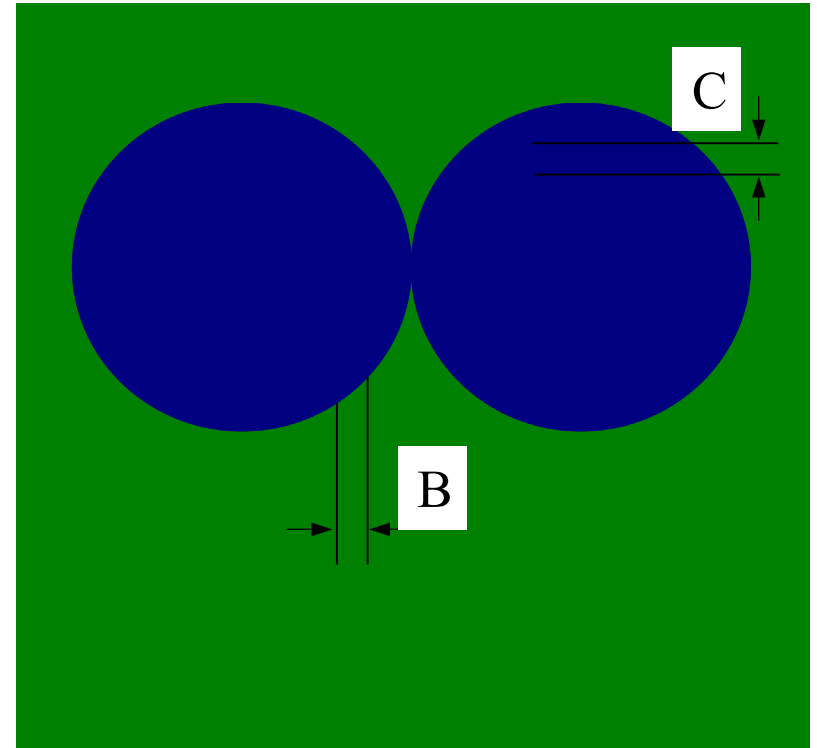
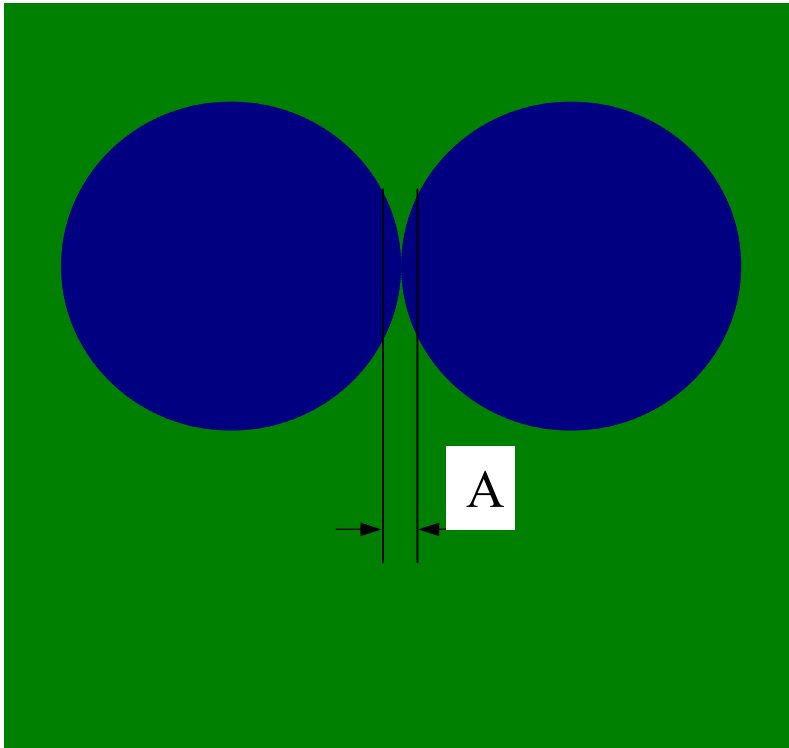
MINIMUM DIMENSIONS		
CODE	DESCRIPTION	DIMENSION (mm)
A	Between Land STH & Pad SMD	0,4
B	Between Land STH & Track pattern	0,35
C	Between Land STH & Mechanical shape	1,5



- **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**

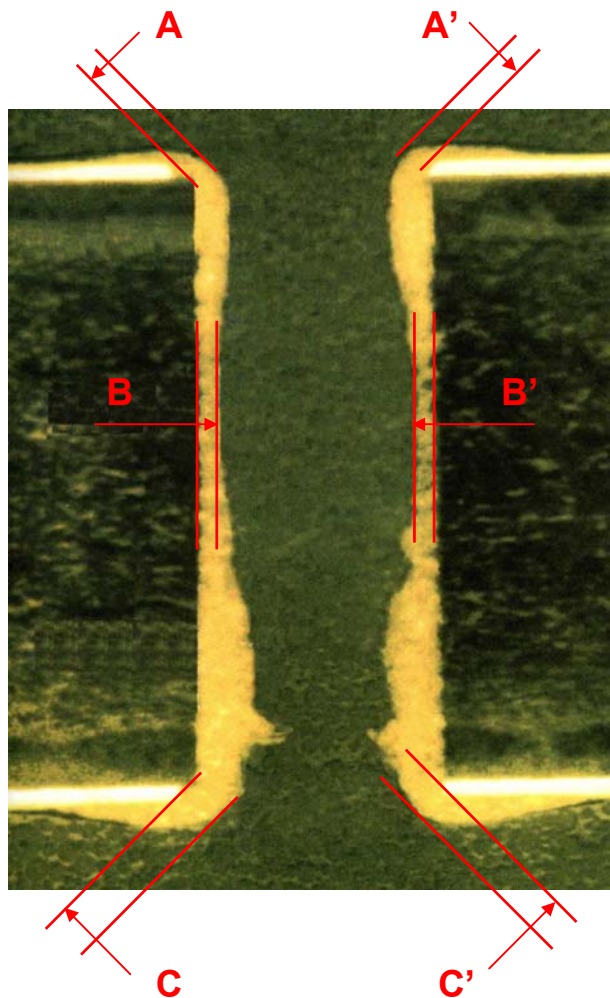
- **Electrical**
 - **Resistance**
 - **$\leq 25 \text{ m}\Omega / \text{Hole}$**
 - **Current Capacity**
 - **$> 500 \text{ mA} / \text{Hole}$**
- **Enviromental**
 - **Humidity**
 - **$40\pm 2^\circ\text{C} / 90\div 95\%\text{RH} / 500 \text{ hours}$** **$\leq 50 \text{ m}\Omega / \text{Hole}$**
 - **High Temperature**
 - **$100\pm 2^\circ\text{C} / 500 \text{ hours}$** **$\leq 50 \text{ m}\Omega / \text{Hole}$**
 - **Temperature Cycle Test**
 - **$\{(40\pm 5^\circ\text{C} / 30 \text{ min}) + (100\pm 5^\circ\text{C} / 30 \text{ min})\} \times 10 \text{ cycles}$** **$\leq 50 \text{ m}\Omega / \text{Hole}$**
 - **Soldering Temperature**
 - **$(260\pm 5^\circ\text{C} / 5 \text{ sec}) \times 3 \text{ cycles}$** **$\leq 50 \text{ m}\Omega$**
/ Hole

- **Life Test**
 - **Humidity**
 - **40±2°C / 90÷95 % RH**
 - **(500mA / 90 min + 0 mA / 30 min) x 500 hours** **≤ 50 m Ω**
 - / Hole**
 - **High Temperature**
 - **70±2°C**
 - **(500 mA / 90 min + 0 mA / 30 min) x 500 hours** **≤ 50 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**



MAXIMUM MISREGISTRATION ALLOWED	MINIMUM DIMENSION		
	CODE	DESCRIPTION	DIMENSION
	A	CLEAR AREA BETWEEN SILVER	0.2 mm
	B	HOLE TO SILVER	0.2 mm
C	HOLE TO SILVER	0.2 mm	

Microsection by IPC-TM-650, method 2.1.1. after solder dip $260 \pm 5^\circ\text{C}$ / 5 sec.



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