

***The leader  
of semiconductor test equipment  
PCB manufacturing***

***ATC*** Ace Tech Circuit

**Development Technology**

**Emphasize Quality**

**On time Delivery**

# ATC PCB Capabilities

## 1. General

Item	Standard		Advanced		Emerging	
	inch	mm	inch	mm	inch	mm
Max. Number of Layers	48		62		70	
Max. Panel size	24.0×26.0	610×660	24.0×26.0	610×660	24.4×28.3	620×720
Max. Board Thickness	0.19"	4.8	0.25"	6.35	0.283"	7.2
Max. Aspect Ratio (on 0.248" thickness)	12:1		24:1		26:1	
BGA pitch	0.02	0.5	0.016	0.4	0.012	0.3
Others	Plugging, Back drill		Plugging, Back drill, Build Up		Plugging, Back drill, Build Up	

## 2. Pattern & Impedance

Item	Standard		Advanced		Emerging		
	inch	mm	inch	mm	inch	mm	
Impedance Control	10%		8%		5%		
Pattern Width	Inner Layer	0.003	0.075	0.0024	0.06	0.002	0.050
	Outer Layer	0.0036	0.090	0.0028	0.070	0.0025	0.063

## 3. Drill & Plating & Surface Finish

Item	Standard		Advanced		Emerging	
	inch	mm	inch	mm	inch	mm
Min. Drill Size	0.008	0.2	0.006	0.15	0.004	0.1
Immersion Gold	1.2u"	0.03 $\mu$ m	1.2u"	0.05 $\mu$ m	1.2u"	0.08 $\mu$ m
Electrolytic Hard Gold	20u"	0.5 $\mu$ m	50u"	1.25 $\mu$ m	60u"	1.5 $\mu$ m

※ It's possible to be able Standard for Immersion Gold as 20u" (0.5 $\mu$ m) from Second quarter in 2013

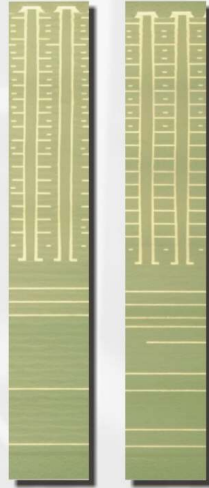
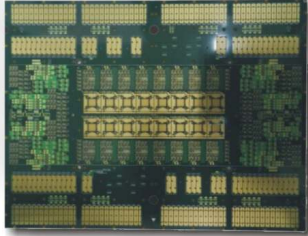
## 4. Others

- 1) Handle with variable material types  
(FR-4, FR-4 High-Tg, Polyimide, BT Resin, Ceramic Filled Composite, etc.)
- 2) Handle with variable surface type such as Au, Ag, Tin, HASL, Flux
- 3) Handle with variable method such as Via On Pad(HPL), Back Drill(Stub Drill), Build Up



# The history of manufacturing

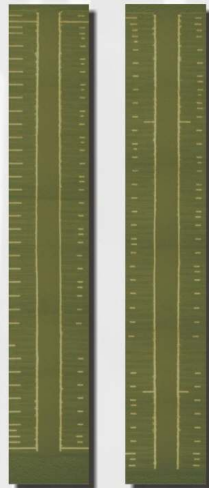
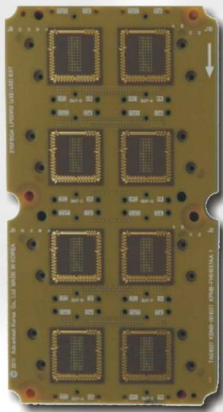
## ► SOC Type Mother Board



Specification		
Material	DS-7409S(FR-4 High Tg)	
Layers	60 Layers	
Thickness	6.35 mm	250.0 mil
Min. Drill $\Phi$	0.15 mm	5.9 mil
Hole Pitch	0.4 mm	15.7 mil
Aspect Ratio	24.1 : 1	
Surface	Immersion Gold	

Remark	
IVH, HPL, Impedance Control	Board Dimension 520.0×680.0mm

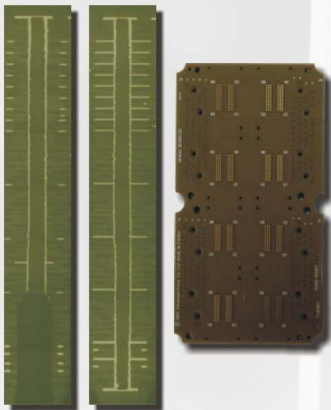
## ► Hi-Fix Board



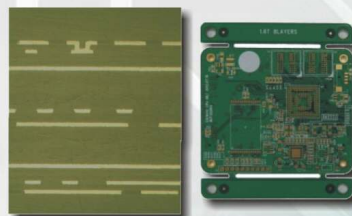
Specification		
Material	N4000-13SI(NELCO)	
Layers	68 Layers	
Thickness	6.5 mm	255.9 mil
Min. Drill $\Phi$	0.2 mm	7.9 mil
Hole Pitch	0.4 mm	15.7 mil
Aspect Ratio	23.8 : 1	
Surface	Immersion Gold	

Remark	
IVH, HPL, Impedance Control	Board Dimension 59.5×109.5mm

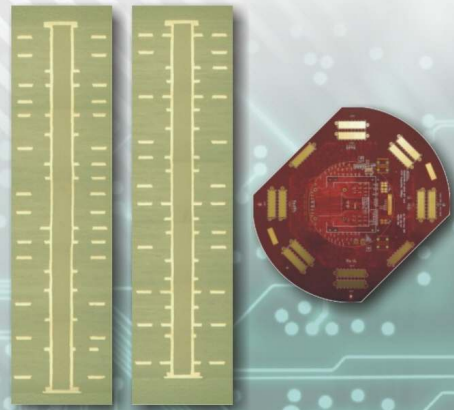
## ► Back Drill(Stub Drill)



## ► Build Up boards



## ► Probe Card



# General ATC PCB Capabilities

ATC leads technique markets of PCB testing semiconductor by using modern facilities  
Such as Reverse Pulse Copper plating, LDI, Inkjet Marking machines.



<Reverse Pulse Plating>

- Possibility of Operating Throwing Power for High Aspect Ratio



<LDI>

- Minimize deviation of the rate of contraction by unused ExposureFilm
- The Realization of an Accurate Pattern



<Plugging Machine>



<Inkjet Marking>

- Through & blind hole filling in one step
- Operate Marking Process without a Plate-Marking Net

- Hi-Fix Board
- SOC Type Mother Board
- Probe Card
- Burn In Board
- General MLB(Multi Layer Board)
- Laser Drill with Micro via, Blind/Buried Via

## ATC Ace Tech Circuit

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