

Void Free & Cost Saving Solution Provider

APT Introduction

Oct. 2015



APT History

APT Establishment: 2007

APT Location: Zhunan, Taiwan

APT Capital: 30M NTD

APT Employee: 30

Position: Being a process-oriented equipment company with dedicated mission of offering competitive alternatives to make any possibilities happen for process improvement, cost-down and driving into production shortly.



APT History

APT

Achievements: APT helps customers to solve process issue through leveraging the necessary need of machine and material each to submit what customer wants instead of pursuing expensive solution. Up-to-date, over 600 system have been delivered.

APT

History:

- •2007, the first VFS applied for SEMI. industry
- •2009, the first VFS applied for O.E. industry
- •2011, the first VFS applied for Flip Chip NUF
- •2012, VFS 250th set shipped.
- •2013, Automation team was established
- •2014, the first VTS applied for Flip Chip CUF
- •2015, the first Automation VTS (VTAS) applied for SEMI. Industry
- •2015, the first MIJ applied for legend and coating for SEMI Industry.

Confidential

APT Core Competency

Industry

- Semiconductors
- Optoelectronics
- PCB
- MFMS
- Automobile
- EMS



Materials

- Cost effective
- Unique material



Material Robust Design

Machine

Process

- Lamination
- Die Bonding
- FC Bonding
- TCB Bonding
- CUF Dispensing
- Encapsulating
- Reflow
- Via filling



Solution Delivery

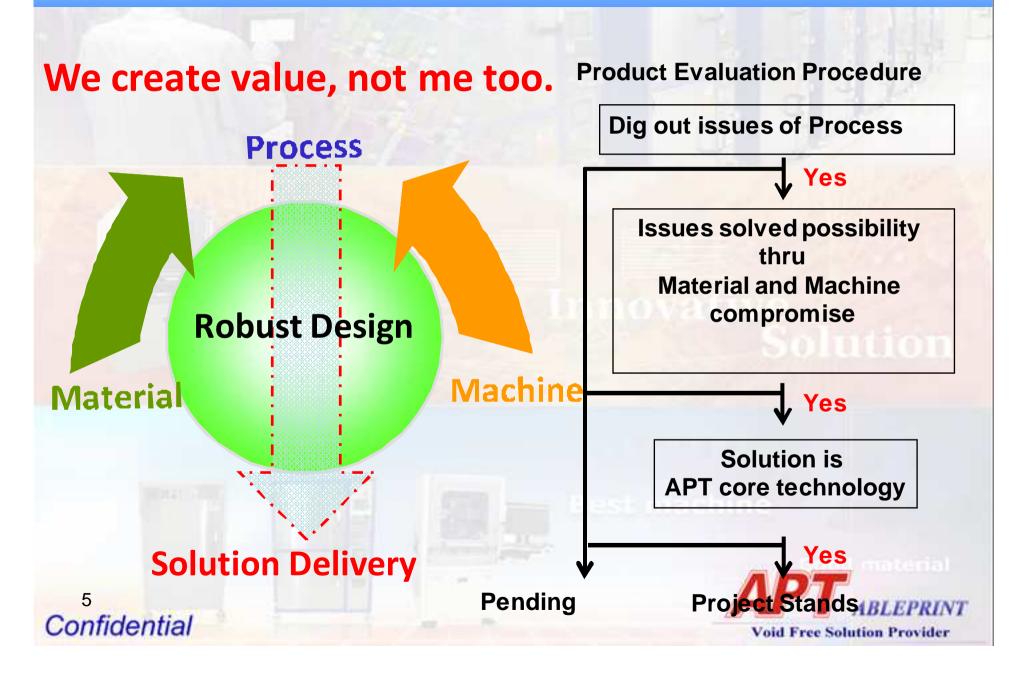
Features

- Customization
- Dedicated Support
- New Application
- Unique Know-how





The Way We Choose



APT Product and Applications

Material

NCP/ NCF	DAF/DAP
Flip Chip CUF	Solder/Cu Paste
Cintanina Danta	TIME D. C
Sintering Paste	TIM Preform

Package

2.5D/3D	POP
FCCSP	WLP
MEMS	Embedded

Process

waferLamination	CUF Dispensing
Die Attachment	TCB Bonding
Reflow Soldering	VIA filling
Ink Jet Printing	Encapsulation

Own Products

VFS

Void Free System

VTS

Void Terminator System

PRO

Pressure Reflow Oven

Pioneer+

Polyimide Curing Oven

VTAS

Void Terminator Auto.

WSO

Warpage Suppression Oven

MIJ

Map Inkjet Printer

BUP

Dispenser

6

w/ Functions

VFS based

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Application Module

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vfs +

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APT Product & Process Roadmap

Solutions:

- **Total Cost Saving for** FC w/ CUF
- **Warpage Suppression** for WLP
- Soldering void free for **WLP & IGBT**

Solutions:

Cost Saving for FC w/ CUF



2015

Solutions:

- Cost-effective NCF for 3DIC
- **Cost-effective TCB for** 3DIC

2016



Product Portfolio-Void Free System

Performance: driving higher quality, lower cost, quick phase in MP through eliminating void efficiently.

2015 **VTAS** 2015 **PRO**







2013 Pioneer+

2009 **Dual VFS**



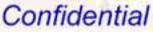






2007

VFS





Product Portfolio- Automation

Performance: driving higher quality, lower cost, quick phase in MP through Map Ink Jet innovative Automation Eq.

Ultra UPH Dispenser

Ultra UPH MGZ cleaner







Best machine



APT Achieves

2016 800 sets 2.5DIC/SMT

Taiwan

Korea

2013 500sets CSP/IGBT/WLP

S.E Asia

2011 200 Sets SIP/BGA/FC

China

2009 **Top 7 OSATs IDM&Materials**

North **America**

Japan

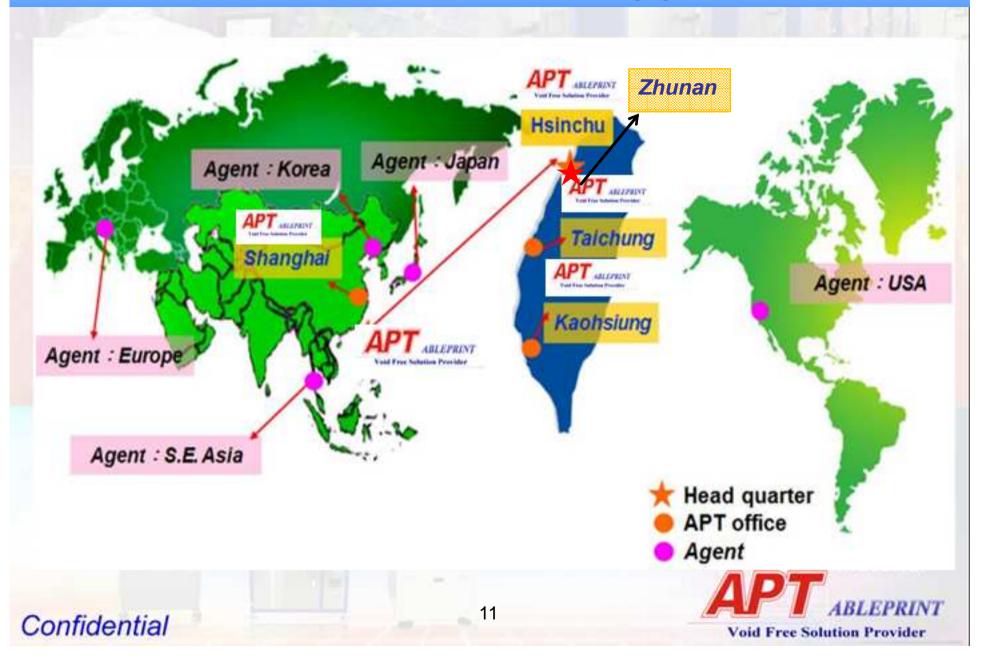
2007 **VFS** DAP/DAF/FOW

Europe

IP **IDM OSATs Foundries** Research Lab **Material Supplier**



APT Worldwide Support



~Thank you for your attention~

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Best machine

