FasTRAK™ Plasma System

Features and Benefits

- Flexible configuration accommodates the full range of strip dimensions and magazine designs
- Advanced robotic handling system minimizes strip handling, pushing, pulling and reduces operator intervention
- New camera-based material tracking provides 100% plasma treatment validation
- High-efficiency, application specific, plasma chamber design offers Direct or Ion Free plasma treatment modes
- Significantly smaller system footprint and magazine reuse capability save space and help lower cost of ownership

High Reliability Strip Handling

The FasTRAK™ system is a fully-automated, high-throughput, plasma treatment system for lead-frame strips, laminate substrates, and other strip-type microelectronic components.

Measuring 1.65 meters wide by 1.5 meters deep the FasTRAK system has a >35% smaller system footprint than previous strip processing models. The capability to reuse magazines further reduces the effective footprint as the empty magazines do not need to be staged at the system.

Using state-of-the-art robotic movement that virtually eliminates operator handling of the strips or magazines, the FasTRAK system accommodates the full-known range of magazines and strip width, length and thickness dimensions.

The FasTRAK system makes it easy to change over to accommodate a new magazine or strip size - recipes are software driven and the system requires minimal hardware interaction or tooling.

The field-proven robotics were specifically designed to lower the handling risk to sensitive substrate materials by using minimal movement, pushing, pulling and low G-forces.

The FasTRAK system features an innovative new material tracking software application and internal camera to count the number of strips and track their progress throughout the entire treatment process, providing 100% treatment validation. Up to 10 strips can be accommodated per batch with an industry leading units per hour (UPH) treatment rate.

The FasTRAK system also includes a new high-efficiency, application-specific, plasma chamber that can be configured for Direct or Ion-Free plasma modes.

Plasma Processes Include

- Pre-die attach for improved adhesion
- Pre-wire bond for higher pull strength and CpKs
- Pre-mold to reduce delamination
- Post-mold to remove flash
- Pre-underfill to reduce voiding

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Specifications: FasTRAK™ Plasma System

Enclosure Dimensions	**W x D x H – Footprint**	1650W x 1500D x 2100H mm (64.96W x 59.06D x 82.68H in.)
	Net Weight	909 kg (2000 lb)
	Equipment Clearances	All Sides – 914 mm (36 in.)
Chamber	**Maximum Volume**	5.5 liters (338 in^3)
Electrodes	**Variable Electrode Configurations**	Power-Ground, Ground-Power; Power-Power
	Working Area	305W x 305D mm (12W x 12D in.)
RF Power	**Standard Wattage**	600 W
	Frequency	13.56 MHz
Gas Control	**Available Flow Volumes**	10, 25, 50, 100, 250 or 500 sccm
	Maximum Number of MFCs	4
Control & Interface	**Software Control**	Programmable Logic Controller (PLC) with PC-Based Touch Screen Interface
	Remote Interface	SMEMA, SECS/GEM
Vacuum Pump	**Standard Dry Pump**	16 cfm
	Optional Wet Pump	19.5 cfm
	Optional Purged Dry Pump	16 cfm
	N2 Purged Pump Flow	2 slm
Facilities	**Power Supply**	220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire
	Process Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Process Gas Purity	Lab or Electronic Grade
	Process Gas Pressure	0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated
	Purge Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Purge Gas Purity	Lab or Electronic Grade N2/CDA
	Purge Gas Pressure	2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated
	Pneumatic Valves Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
	Pneumatic Gas Purity	CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm
	Pneumatic Gas Pressure	3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated
	Exhaust	25.4 mm (1 in.) OD Pipe Flange
Compliance	**SEMI**	E10, S2/S8 (EH&S/Ergonomics)
	International	CE Marked
Ancillary Equipment	**Gas Generators**	Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)
	Facilities	Chiller, Scrubber

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