



MARCH ModVIA

Plasma Treatment for Printed Circuit Board Assembly

The ModVIA™ system builds on the success of the MARCH VIA product series to support printed circuit board manufacturing with outstanding plasma treatment uniformity.

The ModVIA system provides the following:

Industry-Leading Efficiency and Plasma Uniformity

- PCB panels are processed in separate plasma cells to deliver high etch rates with excellent treatment uniformity.
- The system is self-contained and requires minimal floor space. The chassis houses the plasma chamber, control electronics, 40 kHz RF generator, pump/blower package, and automatic matching network. Maintenance access is available from either front or rear access panels.

Application Flexibility

- Three electronic mass flow controllers (MFCs) are standard, enabling optimal gas control. An additional MFC is available as an option.
- The system accommodates many process gases to meet specific requirements (typical process gases may include Ar, O₂, N₂, and CF₄).
- The system accommodates various panel sizes and can process low-volume, high-mixture products, ideal for small to medium-sized businesses or R&D institutions.

Key Application Details

- The ModVIA incorporates the same High Flux Electrode (HFE) design found in the MaxVIA™ plasma systems. The HFE design with a temperature-controlled cooling loop delivers superior plasma treatment uniformity for PCB panel, desmear, and etchback applications.
- Designed to process rigid and flexible PCB panels of various shapes and sizes for through-hole, blind via, etchback, and desmear applications.
- Upgrade the system from four plasma cells to a maximum of eight as production volumes increase.
- The plasma chamber is constructed of durable, high-quality aluminum.
- Low CF₄ gas consumption for desmear, etchback, and panel treatment applications contributes to the lowest cost of ownership in its class.

Specifications

Enclosure Dimensions	W x D x H – Footprint	1652 W x 1747 D x 2445 H mm (65 W x 69 D x 97 H in.)
	Net Weight	1776 kg (3915 lbs.)
Chamber	Available Cells	3, 5 or 7
Electrodes	Configuration	Temperature Controlled Power-Power
	Working Area	1118 D x 660 H mm; (44 D x 26 H in.)
RF Power	Standard Wattage	5 kW
	Frequency	40 kHz
Gas Control	Available Flow Volumes	2000 or 5000 sccms
	Maximum Number of MFCs	4
Control System	Interface	EPC control with PC-based touchscreen interface
Vacuum Pump	Standard Purged Pump Package	530 cfm, Variable Frequency
	Cooling Water Flow	9.5 slm
	N2 Pump Purge Flow	14 slm
Facilities	Power Supply	208 VAC, 50 A, 3-Phase + Ground; 50/60 Hz
	Process Gas Fitting Size & Type	6.35 mm (0.25 in.) Swagelok
	Process Gas Purity	CF4 = 99.97%; O2 = 99.996%; N2 = 99.99%; Ar = 99.999%; H2 = 99.999%
	Process Gas Pressure	1.03 bar (15 psig) min. to 1.38 bar (20 psig) max., regulated
	Purge Gas Fitting Size & Type	6.35 mm (0.25 in.) Swagelok Tube
	Purge Gas Purity	N2 = 99%
	Purge Gas Pressure	1.03 bar (15 psig) min. to 1.38 bar (20 psig) max., regulated
	Pneumatic Valve Fitting Size & Type	6.35 mm (1/4 in.) Swagelok
	Pneumatic Gas Purity	CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm
	Pneumatic Gas Pressure	5.52 bar (80 psig) min. to 6.89 bar (100 psig) max., regulated
	Exhaust Fitting	NW 40 @ Utility Panel
Compliance	USA	EH&S/Ergonomics
	International	CE Marked
Ancillary Equipment	Gas Generators	Nitrogen, Hydrogen (requires Additional Non-Optional Hardware)
	Facilities	Chiller

System Packages

Nordson Electronics Solutions builds the future of electronics reliability all across the globe. We’re proud of the decades of service and solutions we’ve provided to enhance component reliability. No matter where you are, you’ve likely manufactured or purchased a product made reliable with our equipment. The ModVIA offers industry-leading throughput and reliability for printed circuit board assembly applications, designed to last and provide cutting-edge capabilities continuing a time-honored tradition.

Explore the ModVIA system packages. Continue to see how we support the future.

For more information, contact us at info-electronics@nordson.com.

Essential	Uniformity and repeatability.	This essential 40 kHz plasma treatment system delivers high process repeatability and uniformity and accommodates all common gases, including CF4, oxygen, nitrogen, and argon.
Productivity	Advanced throughput and yield.	Accelerate throughput and yield with a power-power electrode configuration that allows both sides of the substrate to receive exceptionally uniform etchback treatment. Balanced vacuum, gas flow, and temperature management technologies enhance optimal performance.

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