

JetEtch CuPROTECT



JETETCH CuPROTECT HIGHLIGHTS

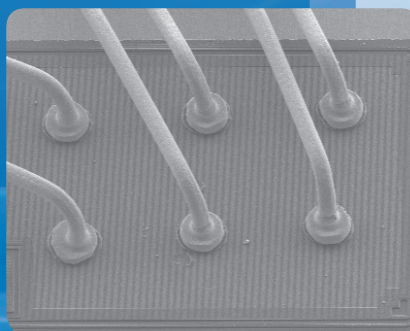
Proprietary Cu Decapsulation Process

- Specifically designed for processing integrated circuits with copper wires.
- Targets the removal of a wide variety of mold compounds while maintaining the integrity of sensitive copper wires.
- Etches virtually any package with any wire thickness
- Produces results that facilitate a host of post-decapsulation failure analysis tests.

Innovative Features of JetEtch Pro

- Industry-leading safety features
- Faster etch processing times
- Flexible etch head designs
- Superior pump longevity
- The most effective software in the industry

SEM image
showing preserved
copper wires



ADVANCED DECAPSULATION SYSTEM

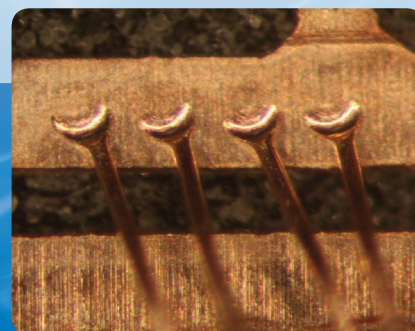
With the price of gold at an all-time high, a current trend in the manufacturing of integrated circuits is the shift from gold to copper bond wires. To support manufacturers in making this shift, Nisene Technology Group has developed a version of its new JetEtch Pro decapsulation system that is specifically designed to handle the processing of sensitive copper wires: the JetEtch CuPROTECT — the latest in a series of innovative solutions for the failure analysis industry from Nisene.

The JetEtch CuPROTECT is the world's most advanced decapsulation system. Employing a proprietary electrolysis process,* its operation is similar to that of Nisene's industry-leading JetEtch products. It retains the intuitive user interface, premier etching capabilities, and robust safety features you've come to expect from Nisene

Technology Group equipment. In addition, the JetEtch CuPROTECT incorporates a unique decapsulation process that specifically targets the removal of a wide variety of mold compounds while protecting and maintaining the integrity of sensitive copper wires.

Unlike less-sophisticated decapsulation systems that cannot etch integrated circuits with copper wires while maintaining their electrical integrity, the JetEtch Pro CuPROTECT can etch virtually any package, with any wire thickness, and yield results that facilitate a host of post-decapsulation failure analysis tests — from bond pull testing to electrical conductivity and resistance.

* patent
pending



Complete
copper wire
bond exposure

JETETCH CuPROTECT SPECIFICATIONS

DIMENSIONS

Etcher unit (mm/in)

290 h x 290 w x 419 d / 11.5 h x 11.5 w x 16.5 d

Bottle container, each unit (mm/in)

230 h x 110 w x 110 d / 9 h x 4.25 w x 4.25 d

Weight (Kg/lbs)

17 / 38 (excluding bottle container and accessories)

POWER

350 W @ 95 - 130 VAC or 350 W @ 210 - 250 VAC

CDA/N₂ REQUIREMENTS

CDA 4.2 Kg/cm² / 60 - 100 psi

Nitrogen supply 2.8 lpm / 0.1 cfm

ETCHANTS AVAILABLE

Etchant volume 1.0 to 10.0 mL/min (software selectable)

Fuming nitric acid

Fuming sulfuric acid

Sulfuric acid (concentrated reagent grade)

Nitric : sulfuric acid mix 6:1, 5:1, 4:1, 3:1

Sulfuric : nitric acid mix 6:1, 5:1, 4:1, 3:1

TEMPERATURE RANGES

Nitric acid (°C) 20 - 90

Sulfuric acid (°C) 20 - 250

Mixed acids (°C) 20 - 100

(mixed etchant range automatically calibrated to ratio selected)

ETCHING TIME & MODALITY (user selectable)

1 - 1800 seconds in 1.0-second increments

Pulse Etch mode, Vortex Etch mode (user selectable)

Bias selection: 0.0 - 20 V in 0.1-V increments

Program capacity: 100, user-defined, in nonvolatile memory

Specifications are subject to change without notice.

HEAT-UP TIME

(user selectable)

0 - 120 seconds in 1.0-second increments

RINSE OPTIONS

Nitric acid, sulfuric acid, no rinse

RESERVOIRS

500-mL or 1-litre bottles

33/38/40/45-mm cap sizes

4 bottles standard: 2 acid, 2 waste

CERTIFICATIONS

CE certification, SEMI S-2-93, SEMI S-2-2000

ACCESSORIES

All JetEtch Pro systems are supplied with a standard basic Accessory Kit. A wide range of Accessory Kits and custom-designed Monolithic Gaskets is available (contact Nisene for details).

DIP/SIP Kit 0300601

QFP Kit 0300604

QFN/MLP Kit 0300609

PLCC Kit 0300602

PBGA Kit 0300605

SOIC Kit 0300603

Die-down BGA Kit 0300606

Universal Accessory Kit 0300612

WARRANTIES

12-month warranty includes all parts and labor.
Excludes consumable items.

5-year warranty for micrometering pump assembly.

INSTALLATION

Installation in chemical fume hood required. 0.5 meters/sec minimum flow rate (100 surface ft/min)

CONTACT Us

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