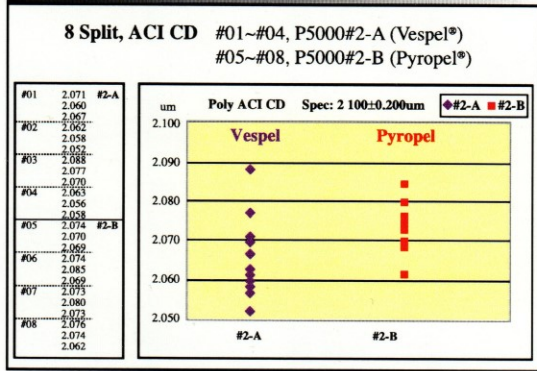


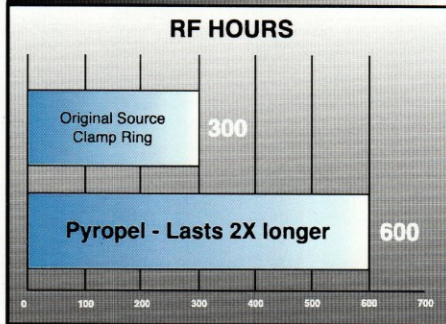
CMOS Manufacturer Improves Performance in Plasma Etch

Etch Uniformity



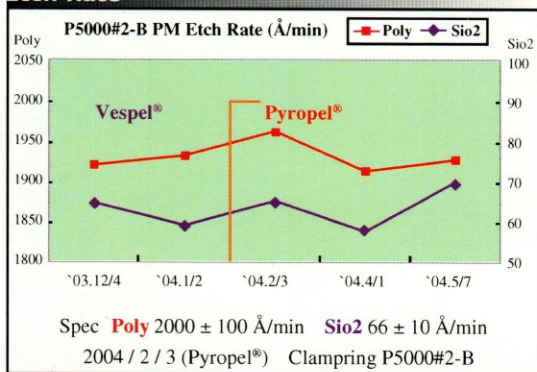
Improved etch uniformity was key to increasing yield and process reliability.

RF Hours



Increased part life from 300 to 600 RF hours without changing process conditions.

Etch Rate



No effect on etch rate after changing to Pyropel

Vespel® is a registered trademark of E.I. DuPont Company.

Japanese CMOS Manufacturer

Customer: CMOS manufacturer located in the Aizu region of Japan. Automotive chip manufacturer – Logic and analog CMOS, MOSFET's, IGBT's and high voltage analog circuits.

Equipment Type: Applied Materials P5000 MxP Poly etch chamber. A clamp ring design made from Vespel® SP-1 is used and replaced every 300 RF hours.

Customer Challenge: To lower the cost on the consumable clamp ring without effecting process conditions.

Process Conditions

- Chemistry - CHF₃, C₂F₆, SF₆
- RF Power - 225 – 450 Watts
- Etch Rate - 2000 Angstroms per minute

Customer Benefits

- Improved etch uniformity
- Reduced particles
- Doubled part life
- Lower cost of ownership