

ABSTRACT OF THE DISCLOSURE

LOW OXIDE TRENCH DISHING CHEMICAL MECHANICAL POLISHING

Chemical mechanical planarization (CMP) polishing compositions, methods and systems are provided to reduce oxide trench dishing and improve over-polishing window stability. High and tunable silicon oxide removal rates, low silicon nitride removal rates, and tunable SiO₂: SiN selectivity are also provided. The compositions use a unique combination of abrasives such as ceria coated silica particles and chemical additives such as maltitol, lactitol, maltotritol or combinations as oxide trench dishing reducing additives.

[No suitable figure]