

**High Speed Abrasive Polishing Sapphire Wafers
Wafer Abrade Test #41, 6" Island Disc #41**

8-2-23

Keltech Engineering
St Paul, MN 55113
www.keltecheng.com

6" Vitrified Diamond Agglomerate Flexible Island Disc
162 Abrasive Islands Per Disc In Annular Band
0.061" High, 0.186 Dia. Islands With Abrasive Agglomerates
Porous Bead Filler Between Islands
Vitrified 30 micron Diamond Agglomerates
2" (50 mm) Sapphire Wafer

Both Disc And Wafer Rotated at 1,000 RPM, CCW
Abrade Pressure, 10psi
Water Spray Cooled Disc And Wafer

Abrade Test Set-up Std Shop Milling Machine
Disc PSA Attached To Hub On DC Motor On Mill
2" Wafer Overhangs 1.75" Annular Band Of Islands

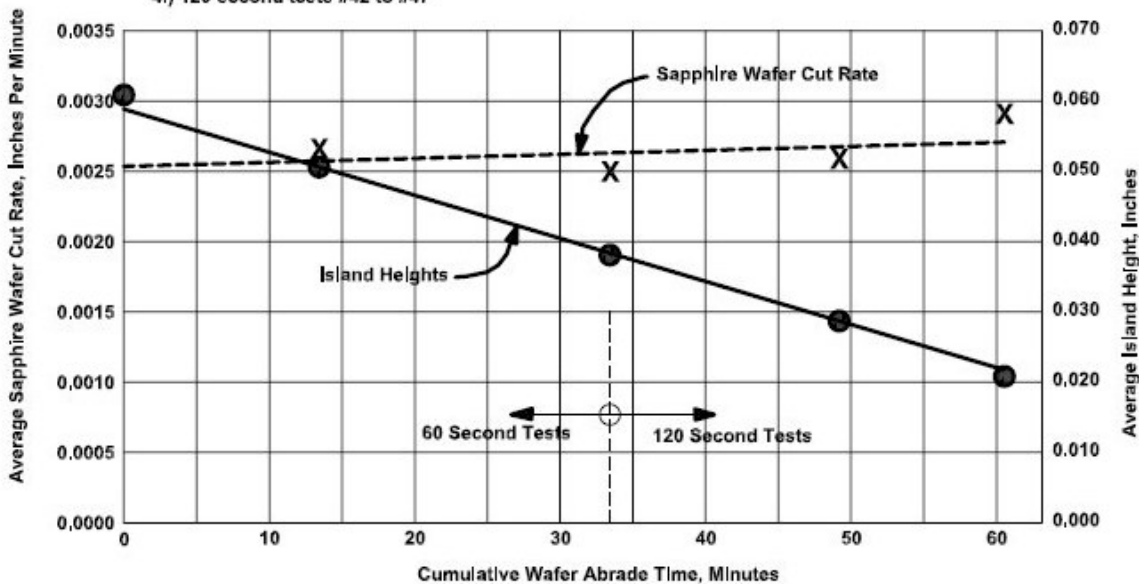
Wide Variety of Disc Sizes And Diamond Abrasive Particles Sizes Available

6" Disc Samples For Users To Abrade 2" Sapphire, SiC, GaN Wafers

Four Groups Of Wafer Abrade Tests

- 1.) 60-second tests #1 to #13
- 2.) 60-second tests #14 to #33
- 3.) 120-second tests #34 to #41
- 4.) 120-second tests #42 to #47

Plotted Data Points Are For Each Abrade Test Group
Avg. Wafer Cut Rates, Worn Island Heights
Wafer Thickness Measured At 4 Positions, Averaged
Island Heights Measured At 6 Positions, Averaged



**High Speed Sapphire Wafer Abrading Using
Vitrified Diamond Agglomerate Island Discs**