AZ® MiR™ 900 Photoresist

Data Package

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AZ MiR 900 Photoresist
Process Conditions

Coat: 2.5 or 3.5µm on 6 inch bare Si
SB: 90°C for 60 sec. (DHP)
Exposure: Nikon NSR-1755i7B(NA=0.54)
PEB: 110°C for 90 sec. (DHP)
Develop: AZ® 300MIF(2.38%)
    single puddle for 60 sec.@ 23°C
AZ MiR 900 Photoresist
Spin Speed Curve

Spun on 8" Silicon wafers / Softbake 90°C for 60 sec in contact mode
AZ MiR 900 Photoresist
Resolution @ 2.5μm FT

Dense Lines @ 134 mJ/cm²

0.7 μm

0.5 μm
0.55 μm
0.6 μm
0.65 μm
AZ MiR 900 Photoresist
Resolution @ 2.5μm FT

Dense Lines @ 146 mJ/cm²
AZ MiR 900 Photoresist
Resolution@2.5μm FT

Dense Lines @ 158 mJ/cm²
AZ MiR 900 Photoresist
Focus Latitude @ 2.5μm FT (pattern size: 1μm)

@ 134 mJ/cm² | @ 146 mJ/cm² | @ 158 mJ/cm²

-1.4μm
-1.2μm
-0.8μm
-0.4μm

Best Focus
+0.4μm
+0.8μm
+1.0μm

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AZ MiR 900 Photoresist
Focus Latitude @ 2.5μm FT (pattern size: 0.8μm)

@ 134 mJ/cm²

@ 146 mJ/cm²

@ 158 mJ/cm²

Best Focus
AZ MiR 900 Photoresist
Resolution@2.5μm FT

1.0 μm
0.9 μm
0.8 μm
0.75 μm
0.7 μm
0.6 μm
0.65 μm
0.5 μm
0.55 μm

Trench @ 134 mJ/cm²

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AZ MiR 900 Photoresist
Resolution@2.5μm FT

Trench @ 146 mJ/cm²

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AZ MiR 900 Photoresist
Resolution@2.5μm FT

Trench @ 158 mJ/cm²

1.0 μm  0.9 μm  0.8 μm  0.75 μm  0.7 μm  0.6 μm  0.65 μm

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AZ MiR 900 Photoresist
Resolution@3.5μm FT

Dense Lines @ 177.5 mJ/cm²
AZ MiR 900 Photoresist
Resolution @ 3.5 μm FT

Dense Lines @ 197.0 mJ/cm²
AZ MiR 900 Photoresist
Resolution@3.5μm FT

Dense Lines @ 216.5 mJ/cm²
AZ MiR 900 Photoresist
Focus Latitude @ 3.5\(\mu\text{m}\) FT (pattern size: 1.5\(\mu\text{m}\))

@ 177.5 mJ/cm\(^2\)  @ 197.0 mJ/cm\(^2\)  @ 216.5 mJ/cm\(^2\)

-1.2\(\mu\text{m}\)

-0.8\(\mu\text{m}\)

-0.4\(\mu\text{m}\)

Best Focus

+0.4\(\mu\text{m}\)

+0.8\(\mu\text{m}\)

+1.2\(\mu\text{m}\)

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AZ MiR 900 Photoresist
Focus Latitude @ 3.5μm FT (pattern size: 1.0μm)

@ 177.5 mJ/cm²
@ 197.0 mJ/cm²
@ 216.5 mJ/cm²

-1.2μm
-0.8μm
-0.4μm
Best Focus
+0.4μm
+0.8μm
+1.0μm

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AZ MiR 900 Photoresist
Resolution@3.5μm FT

Trench @ 177.5 mJ/cm²

Trench @ 197.0 mJ/cm²

Trench @ 216.5 mJ/cm²
AZ MiR 900 Photoresist

Adhesion Property

FT: 3.5 μm; Post Bake: 110°C or 120°C for 120sec.; Etching: HF/NH₄F=1/6, 23°C(Dip.)

<table>
<thead>
<tr>
<th>Post Bake</th>
<th>Etching Time</th>
<th>10 μm Line</th>
<th>5 μm Line</th>
<th>2.0 μm Space</th>
<th>1.5 μm Space</th>
<th>1.2 μm Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>110°C</td>
<td>620 Sec.</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
<td>110°C</td>
<td>680 Sec.</td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
</tr>
<tr>
<td>110°C</td>
<td>740 Sec.</td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
<td><img src="image13.png" alt="Image" /></td>
<td><img src="image14.png" alt="Image" /></td>
<td><img src="image15.png" alt="Image" /></td>
</tr>
<tr>
<td>120°C</td>
<td>620 Sec.</td>
<td><img src="image16.png" alt="Image" /></td>
<td><img src="image17.png" alt="Image" /></td>
<td><img src="image18.png" alt="Image" /></td>
<td><img src="image19.png" alt="Image" /></td>
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