AZ® 40XT Series

Chemically Amplified
Positive Tone Thick Photoresist
For Etch and Plating Applications

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AZ® 40XT-11D Summary

- Chemically Amplified Platform
- Excellent photospeed
- Good development time
- TMAH Developer compatible
- High throughput
- Superior DRIE resistance
- Copper compatible
AZ® 40XT-11D
Photoresist Optical Parameters

Cauchy Parameters

A = 1.560
B = 0.007 μm⁻²
C = 0.0006 μm⁻⁴

n & k Values

λ = 362.04 nm: n = 1.6443  k = 0.002779
λ = 367.41 nm: n = 1.6431  k = 0.000630
AZ® 40XT-11D Photoresist, FT=40 µm
40 µm Contact Holes (1:0.7 Pitch) Exposure Latitude

Substrate: 200mm Silicon
Film Thickness: 40 µm
Suss ACS 300 Plus coat and Bake
SB: 126°C/7 minutes
Suss MA200 CC Mask Aligner/20 µm proximity gap
PEB: 105°C/100 seconds
AZ 300 MIF/4X60 sec spray/puddle @ 23 °C
AZ® 40XT-11D Photoresist, FT=40 µm
L/S Linearity on Silicon @ 400 mJ/cm²

Film Thickness: 40 µm
Suss ACS 300 Plus coat and Bake
SB: 126°C/ 7 minutes
Suss MA200 CC Mask Aligner/ 20 µm proximity gap
PEB: 105°C/ 100 seconds
AZ 300 MIF/ 4X60 sec spray/puddle @ 23 °C
**AZ® 40XT-11D**

**Performance on Silicon at 40µm FT**

Softbake: 115°C/60sec @ 0.05” gap, + 60sec @ 0.025” gap, + 240sec @ 0.002” gap

EBR: EBR 600 for 60 sec followed by bake 115°C/10sec @ 0.002” gap

Exposure: Suss MA-200, Broadband, proximity exposure; Exposure gap: FT+30µm (70µm)

PEB: 100°C/30sec @ 0.002” gap

Develop: 3x60 sec puddle AZ 300 MIF Developer @23°C