

Potential HSQ Alternative: Medusa 82

Preliminary Results

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MAEBL 2019 Charter Sponsors

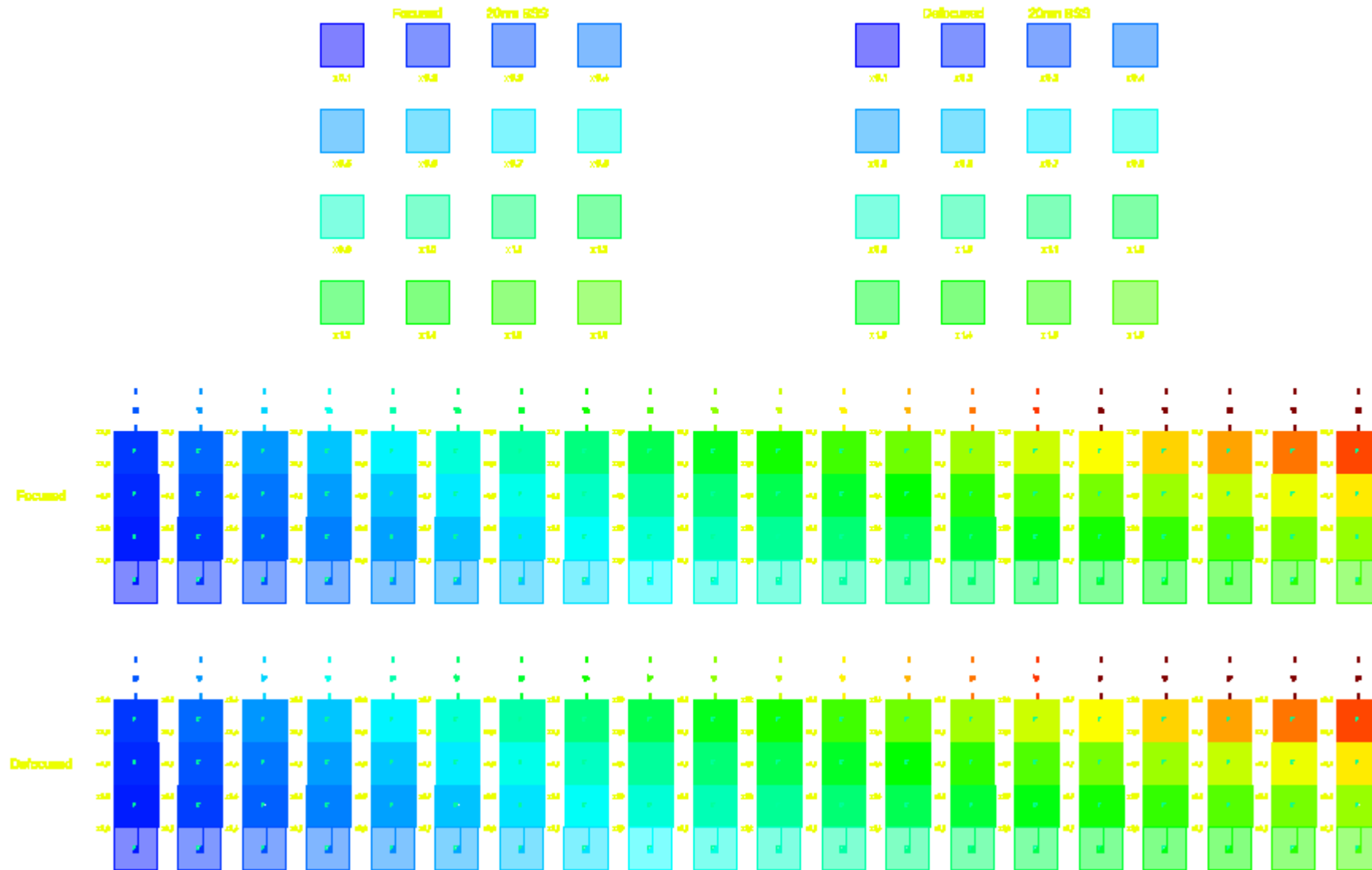


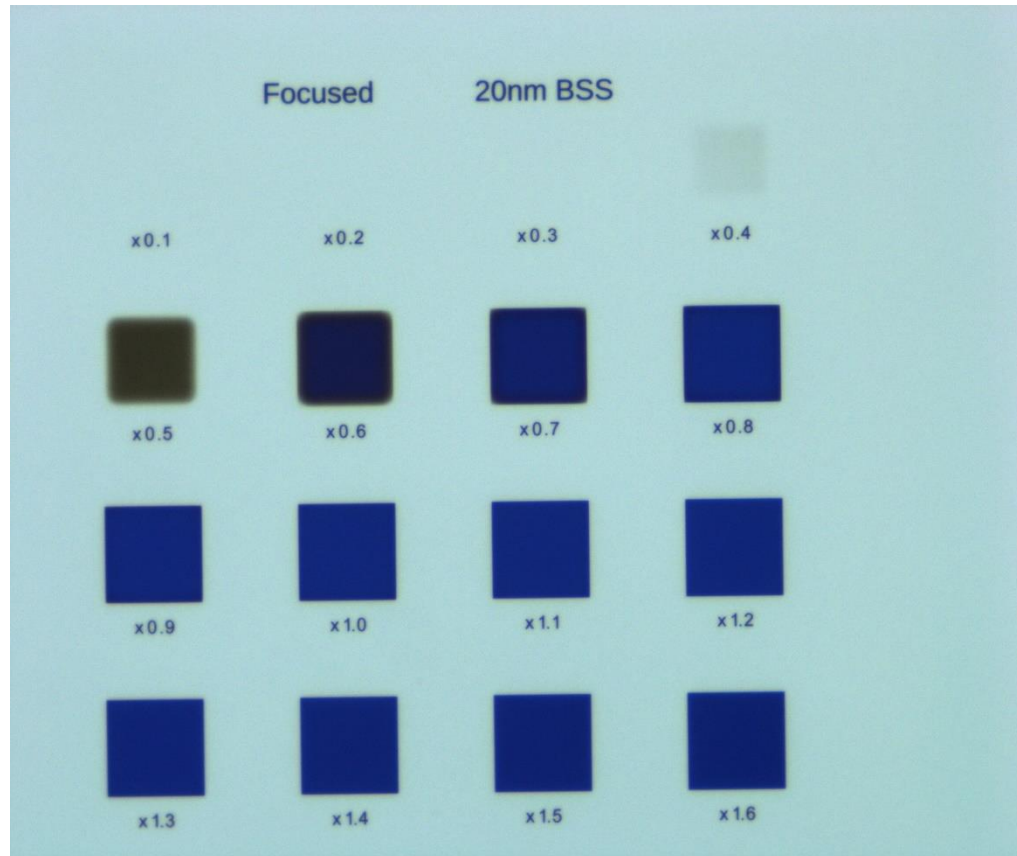


AllResist AR-N 8200 Medusa 82

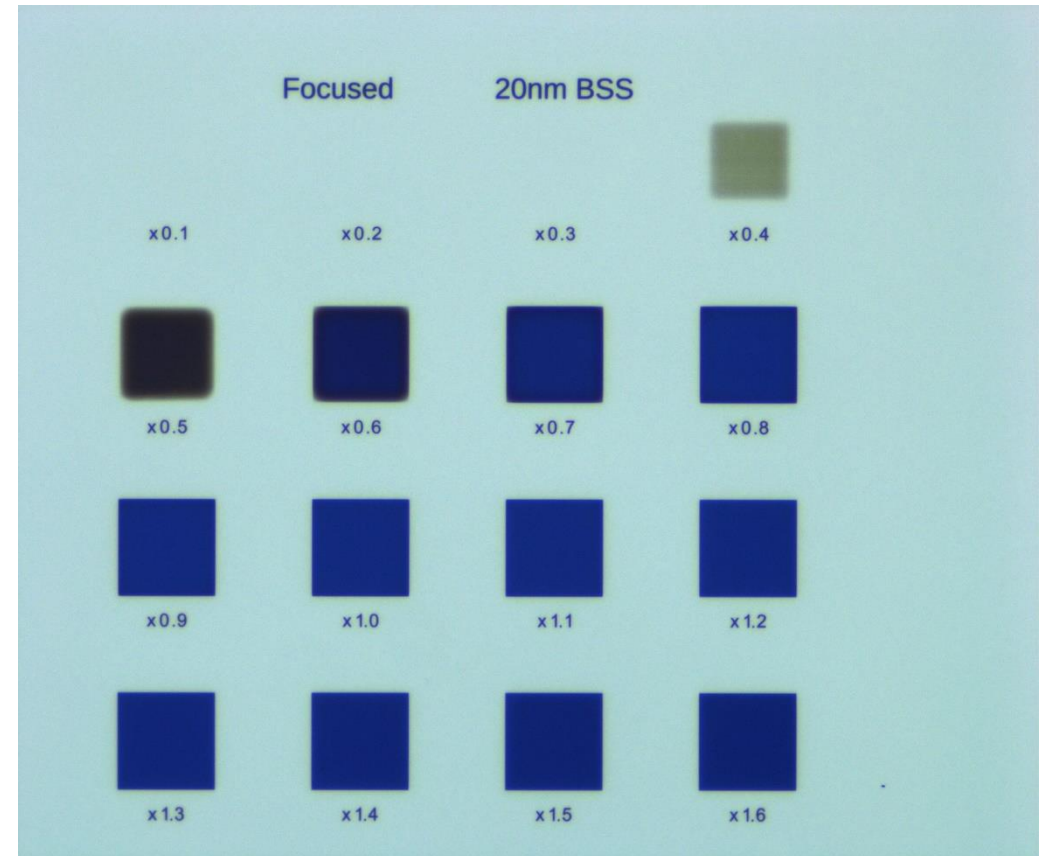
- Si Substrate: 25 mm x 25 mm
- Spin coat 4000 rpm, 60 sec
- Soft bake 180C, 7min
- Expose: 4 nA 20nm BSS
- Dose slope 2.0
- Develop in MF-319 for 120 sec





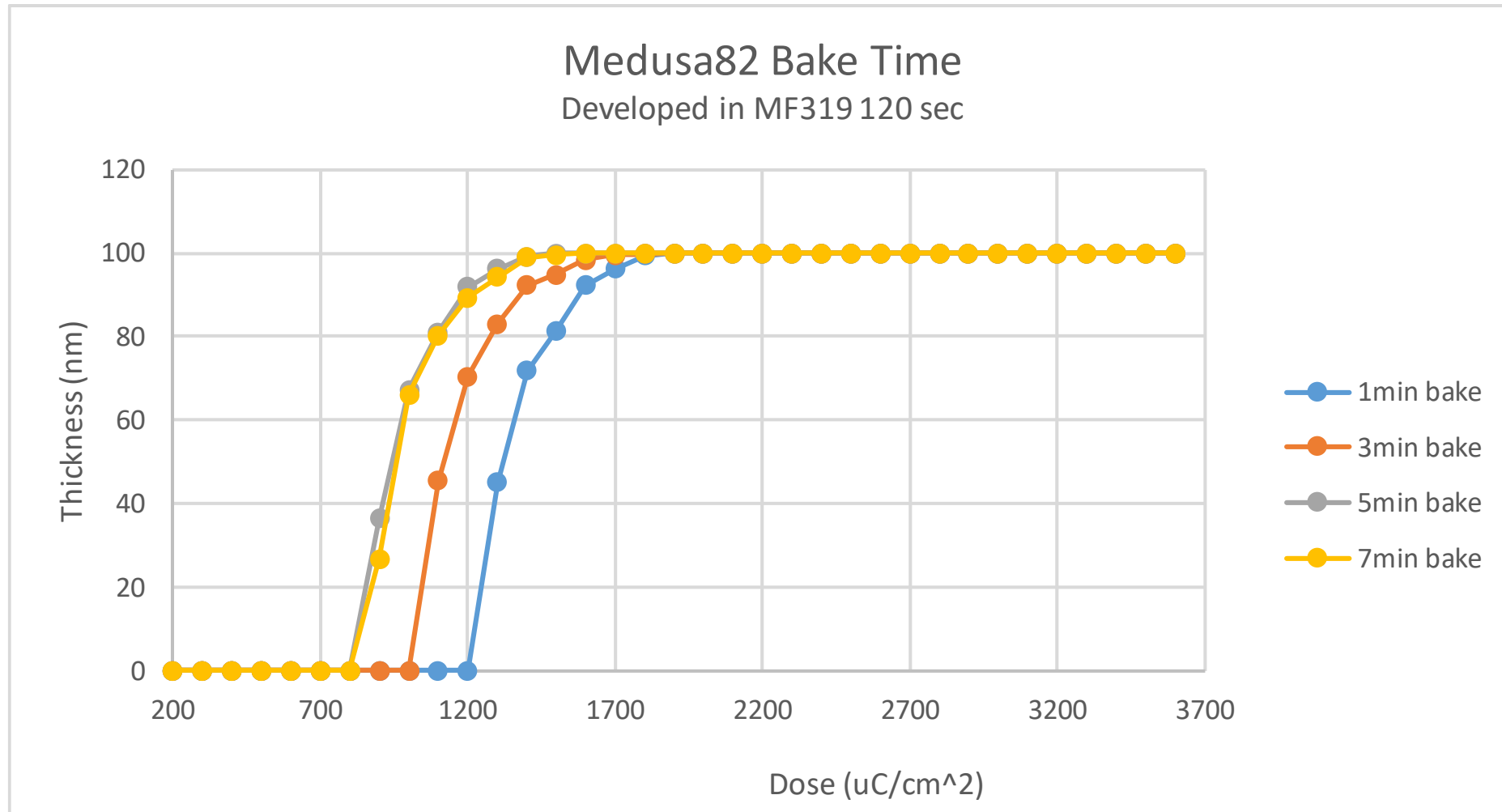


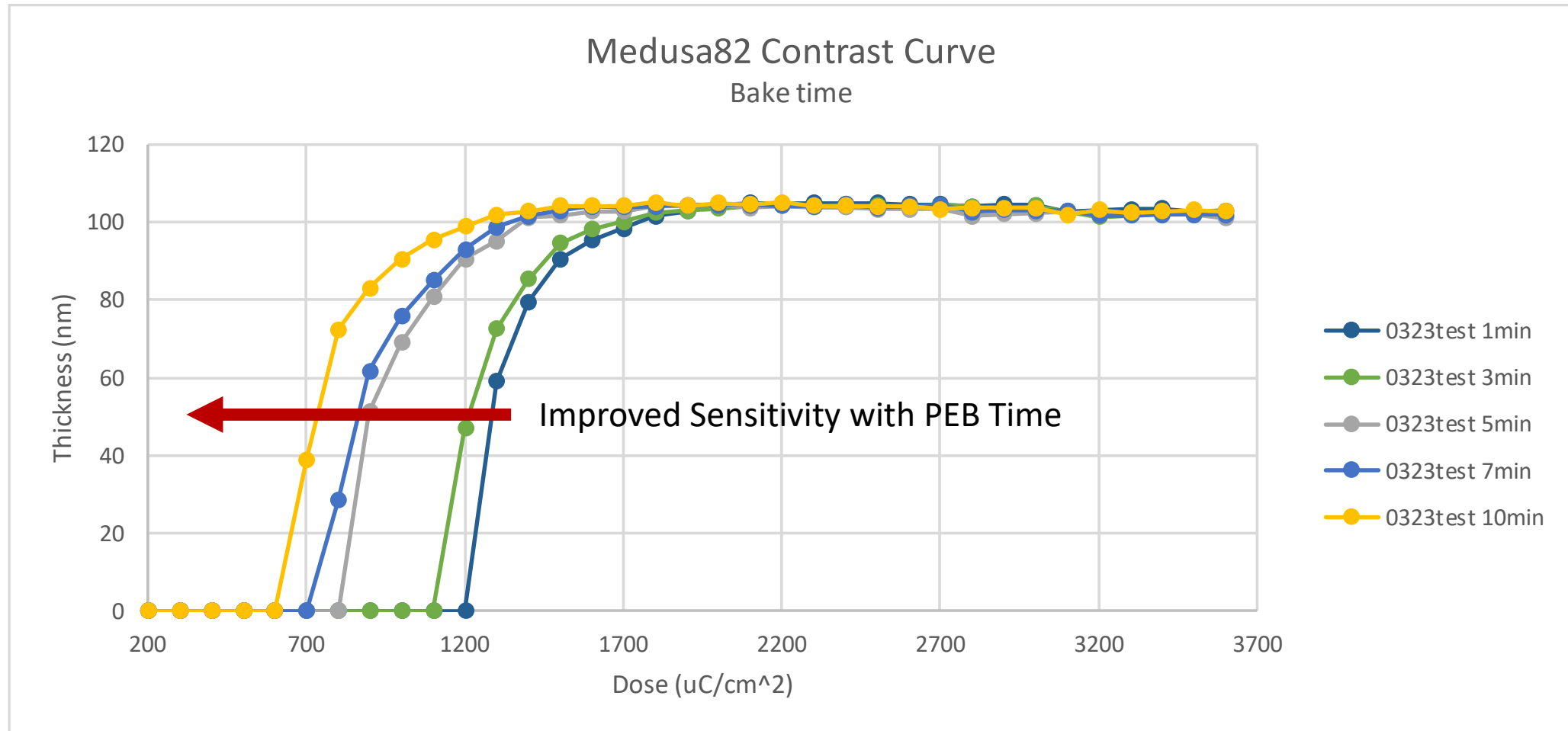
Running single contrast curve

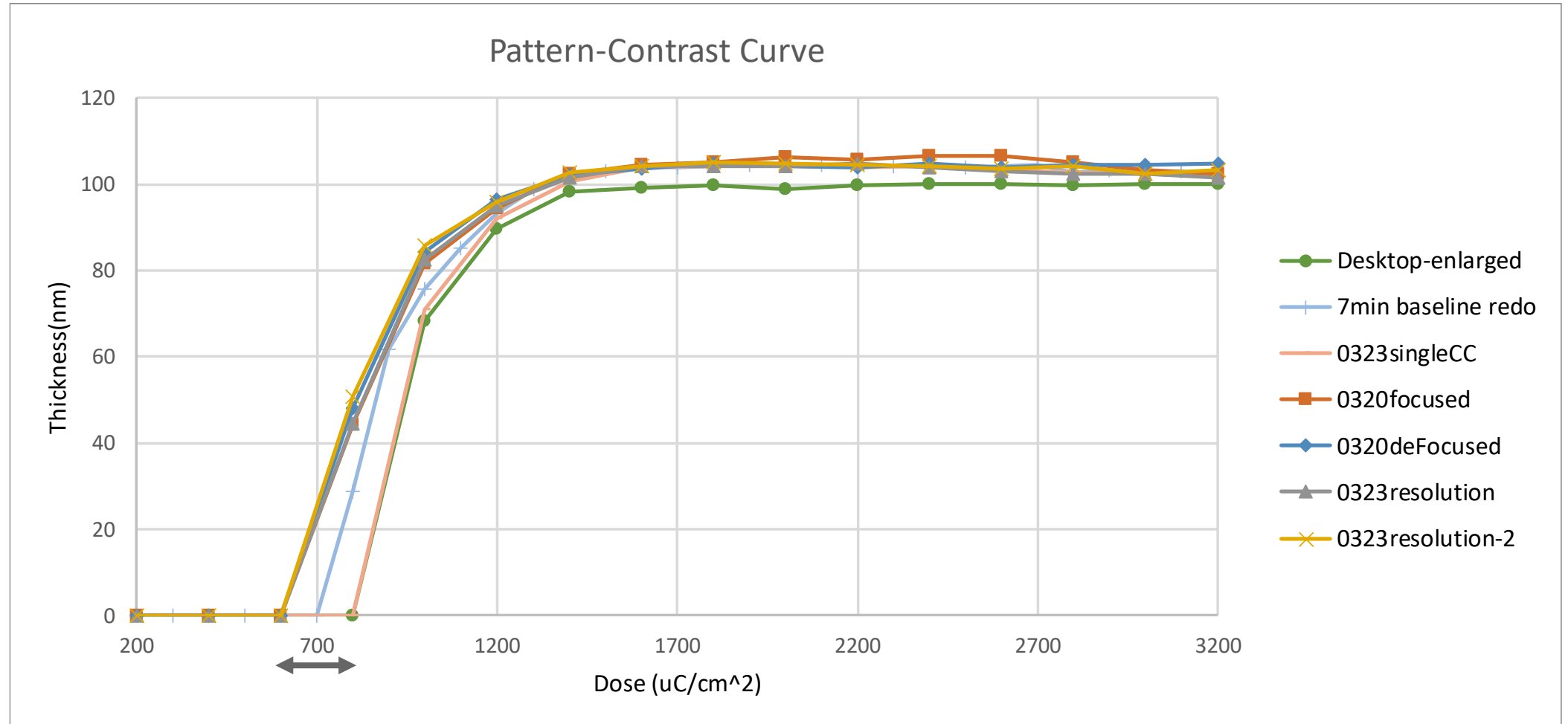


Running the whole pattern

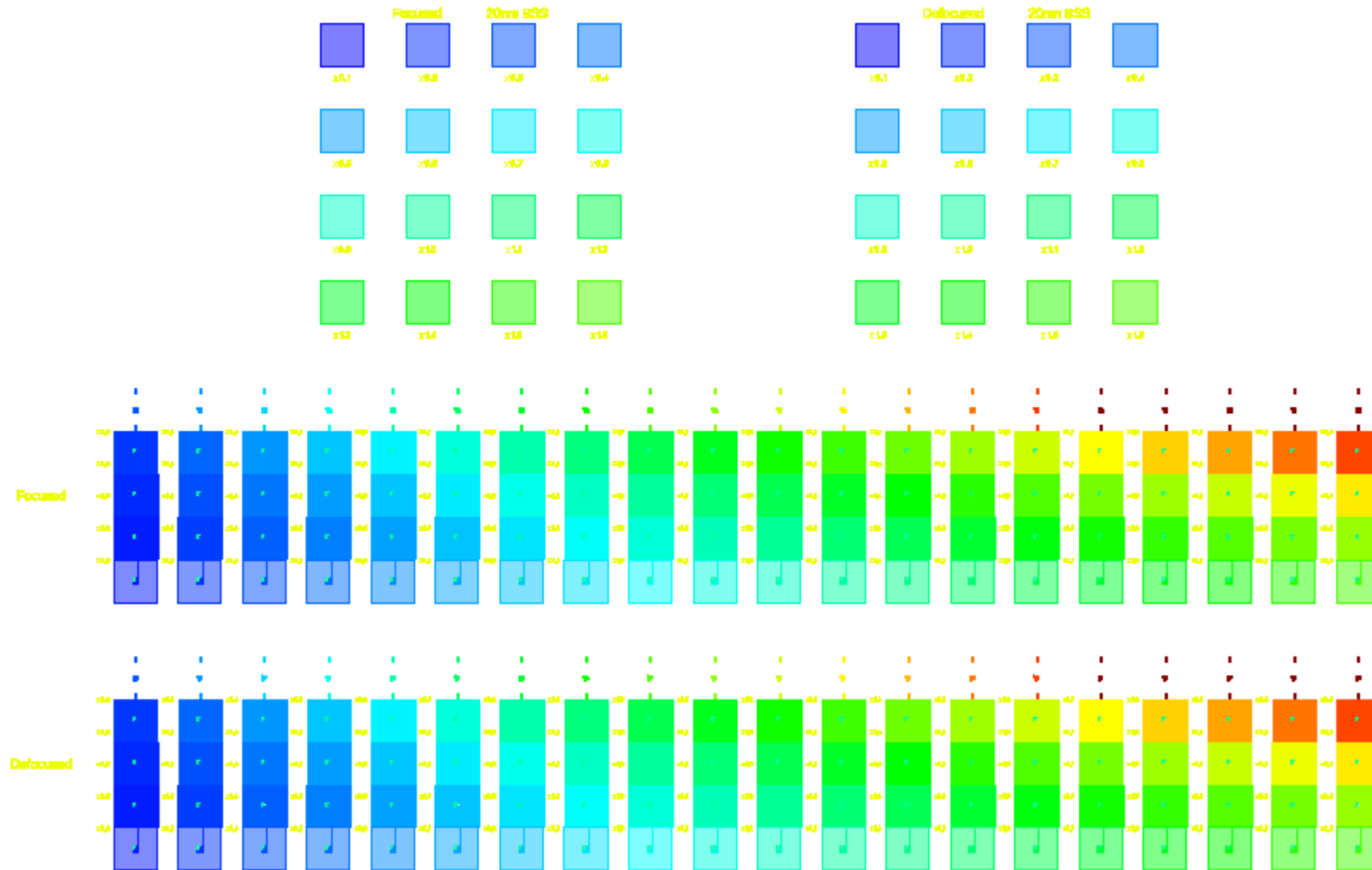
Part 1: Pre-Exposure Bake Time vs. Sensitivity

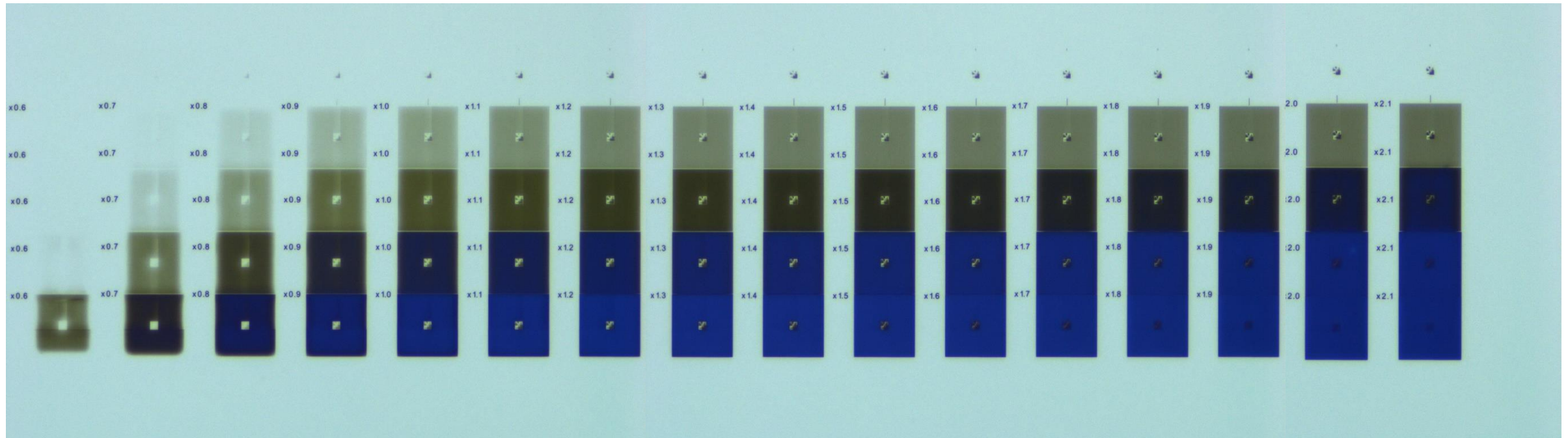




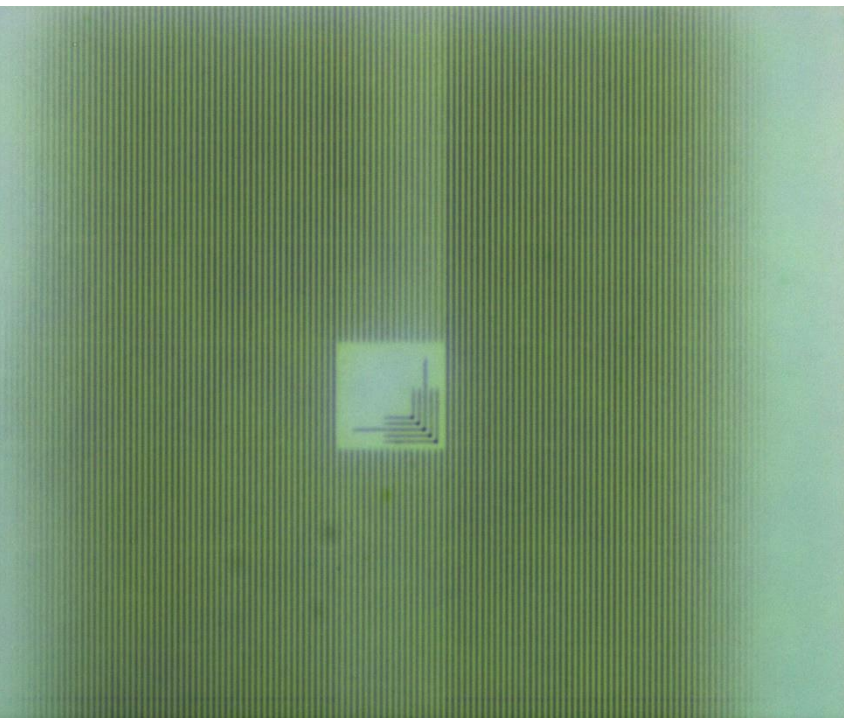


600-800 $\mu\text{C}/\text{cm}^2$ Response Window

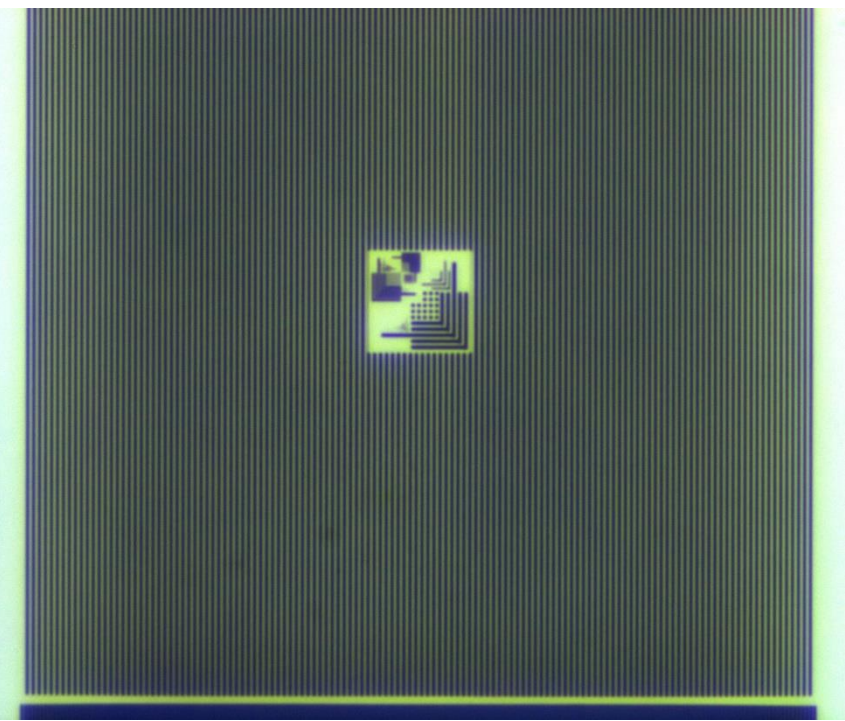




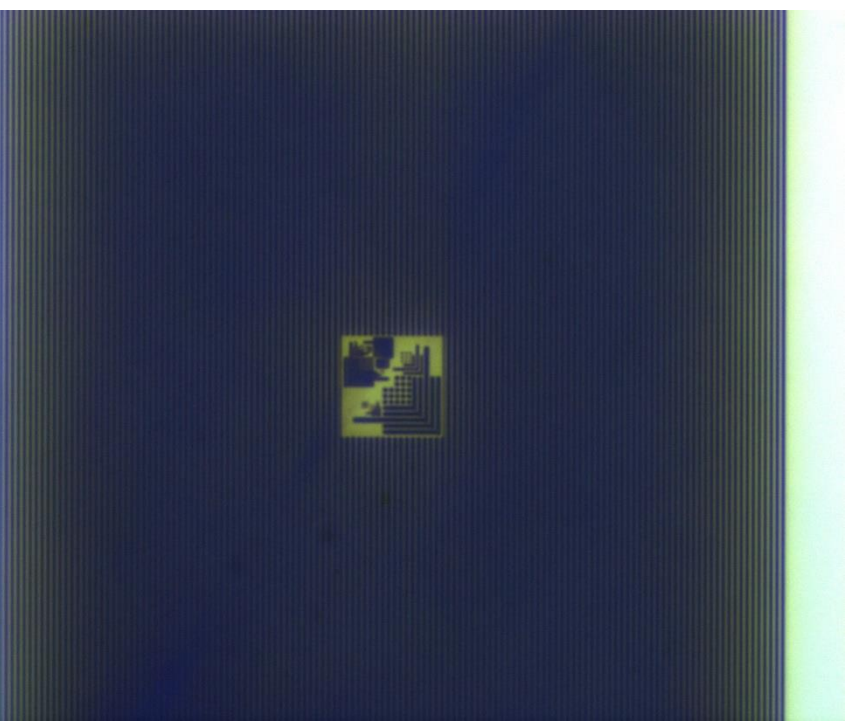
Resolution Patterns: 50% Pattern Density



0.80



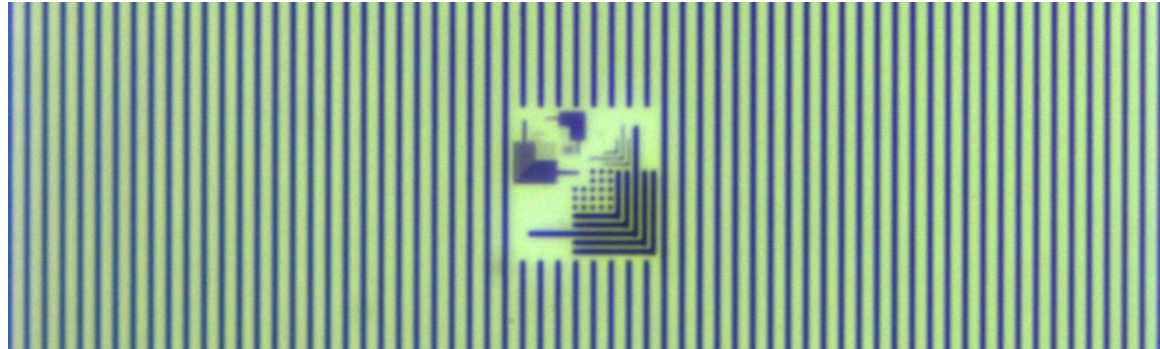
1.40



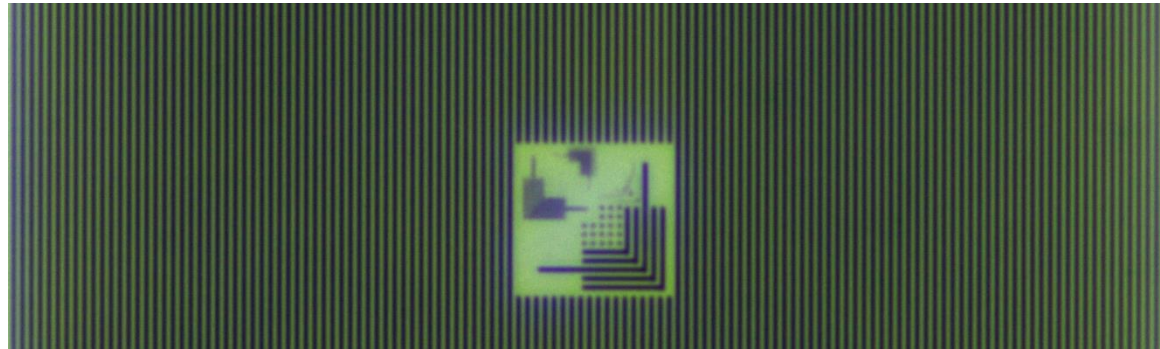
2.10

1.5 Dose Factor

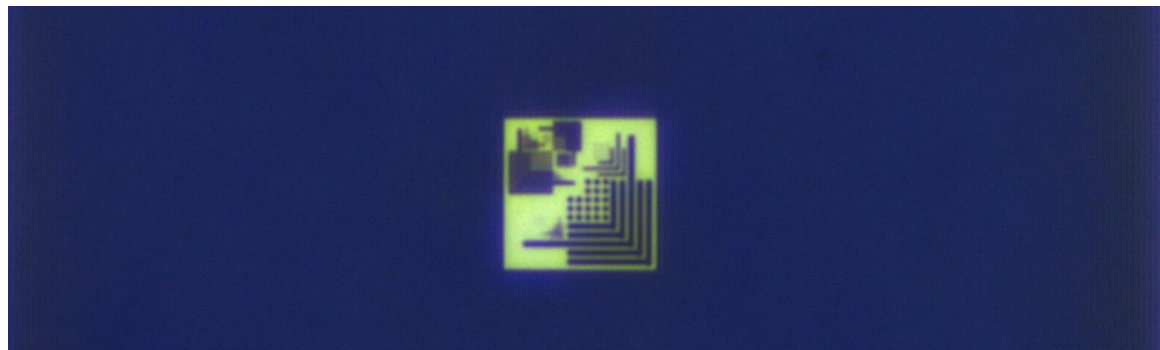
025



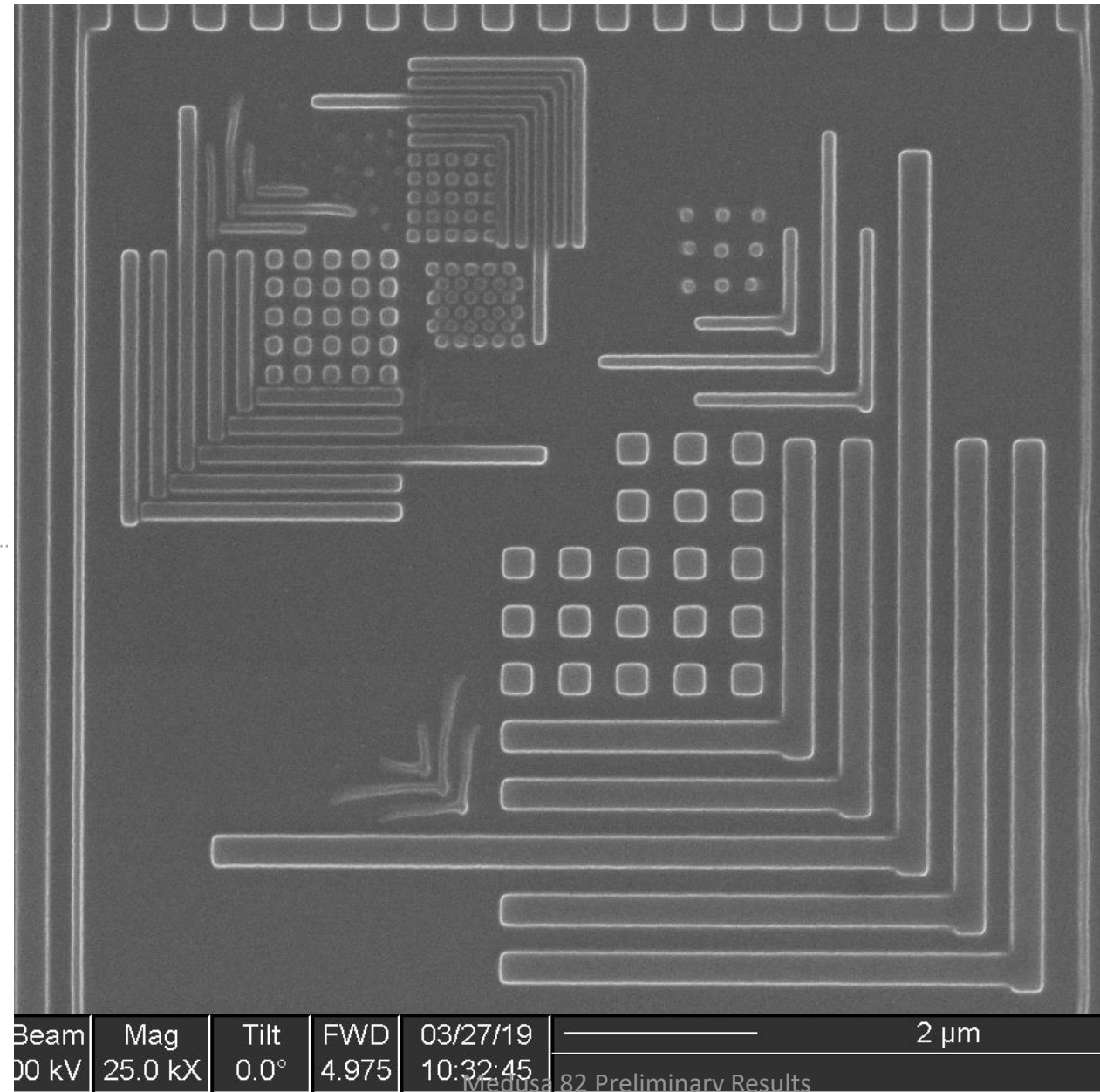
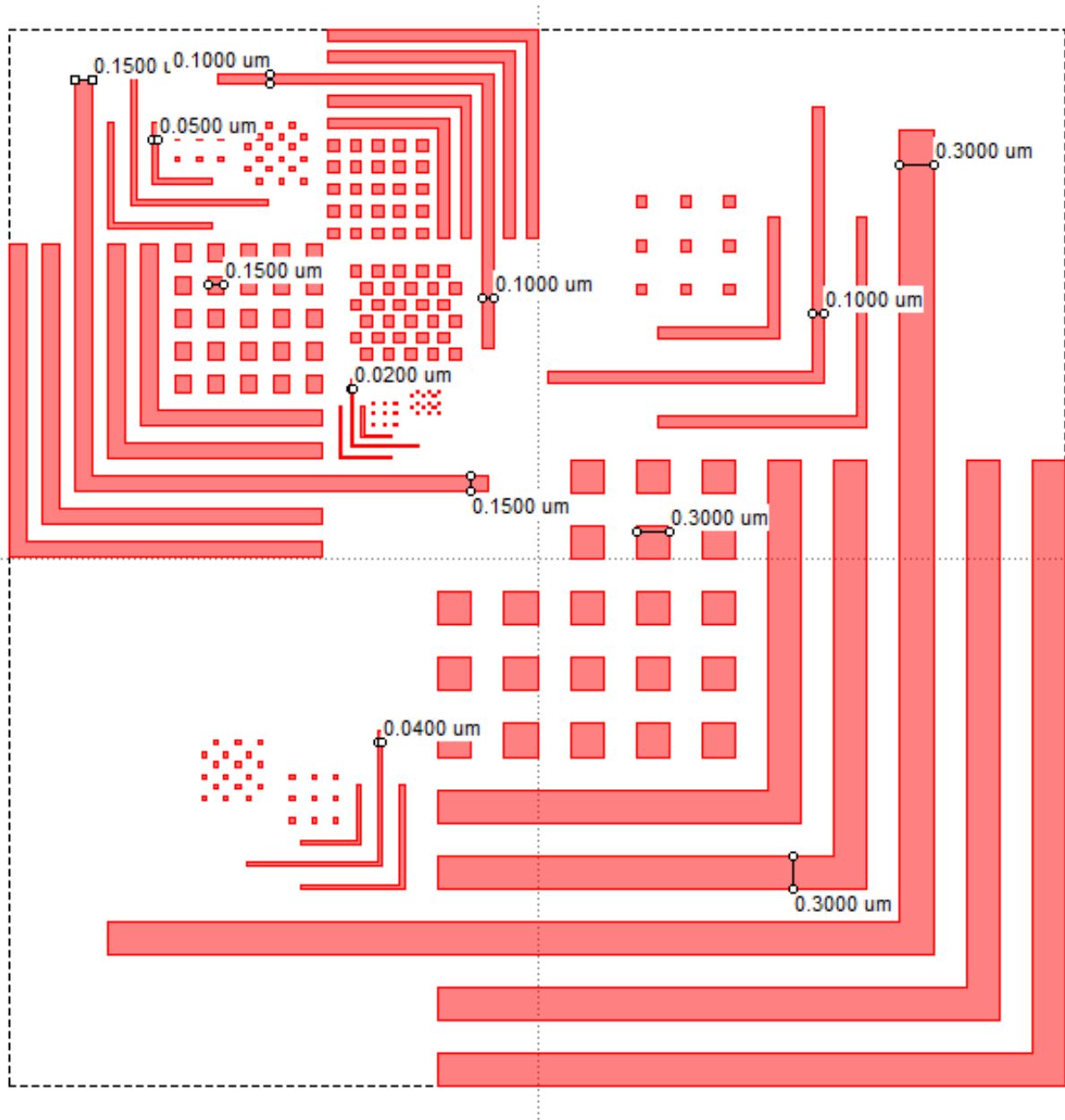
050



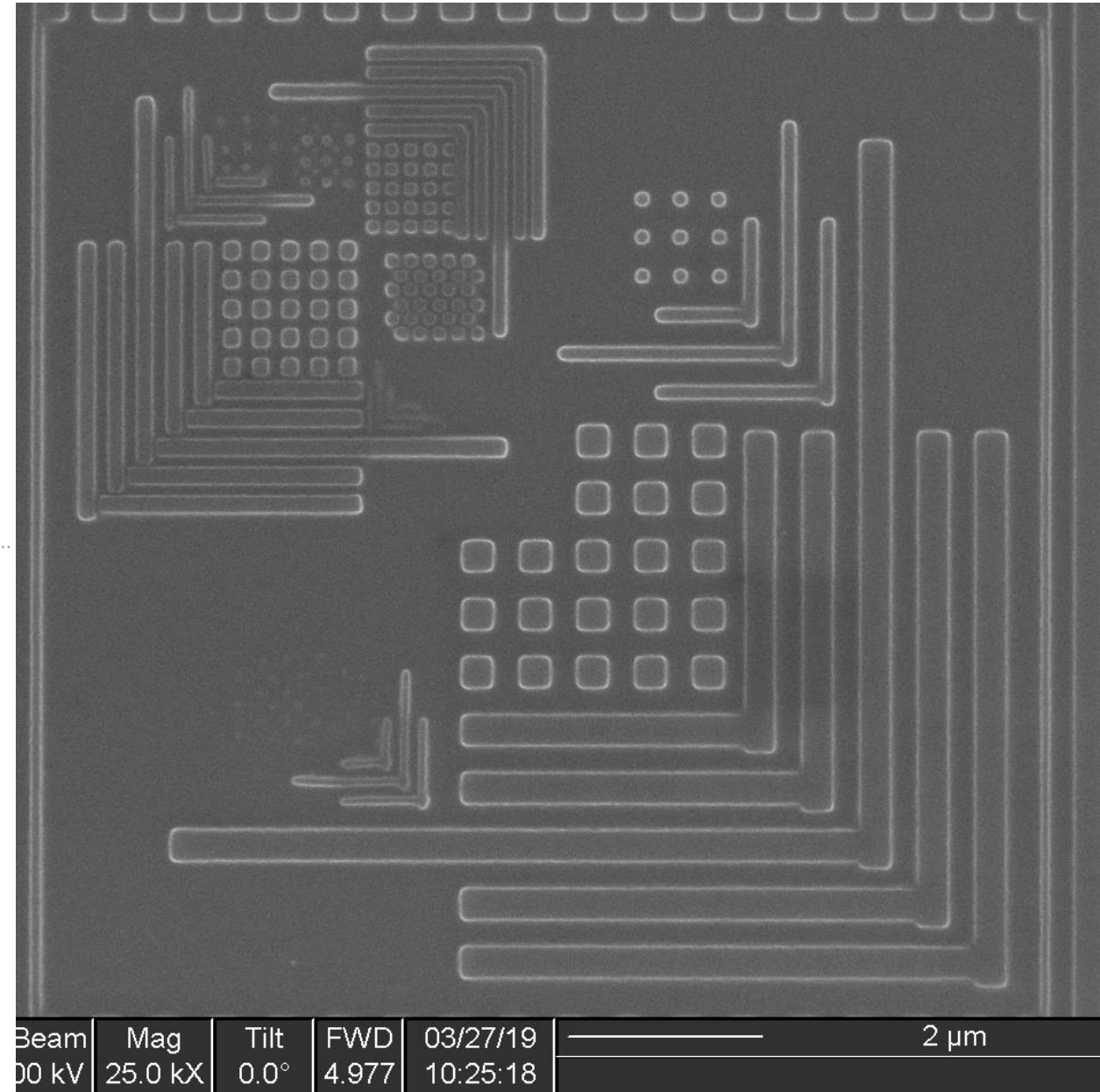
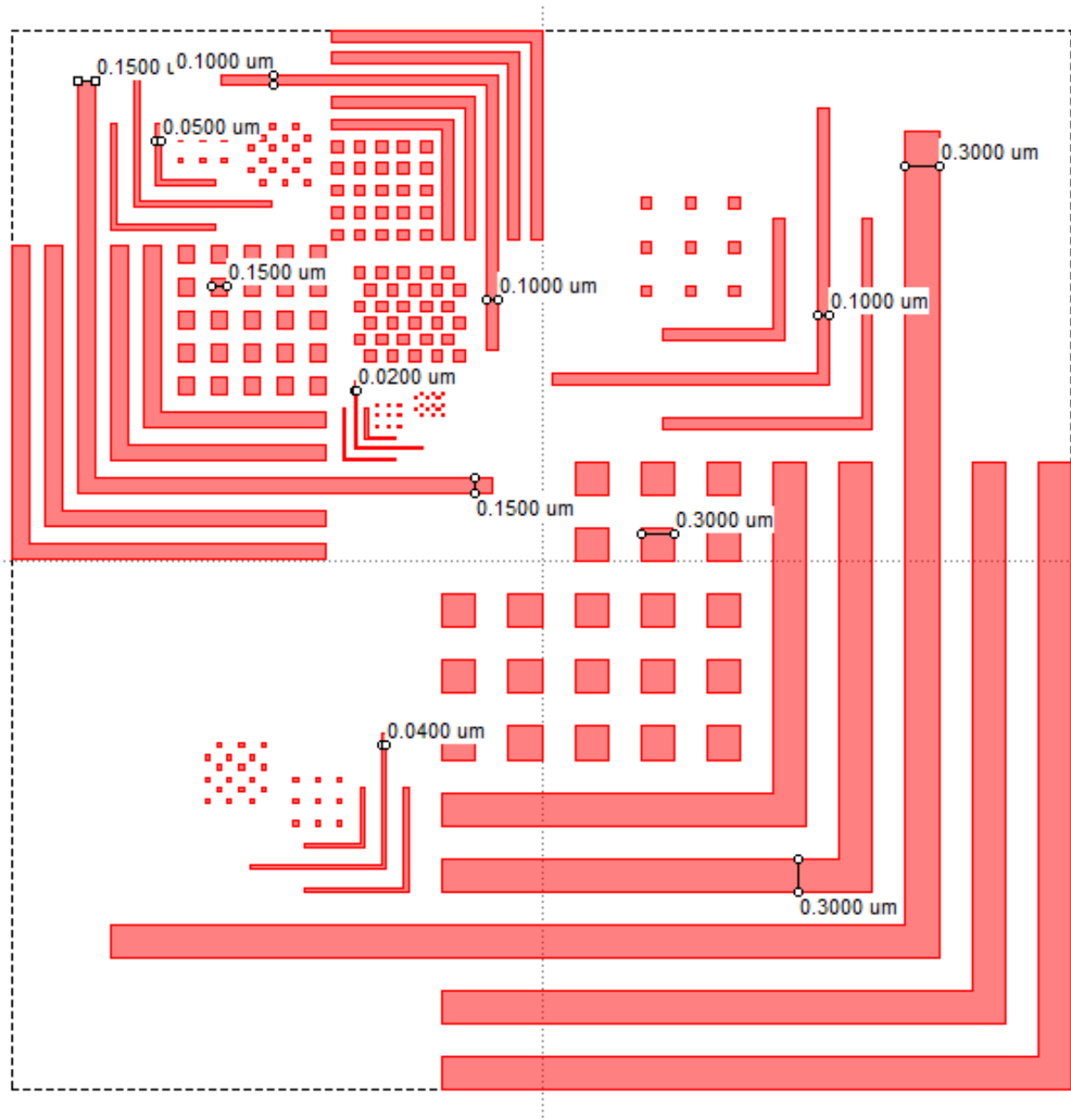
075



Resolution Test Pattern: 50% at 1.6

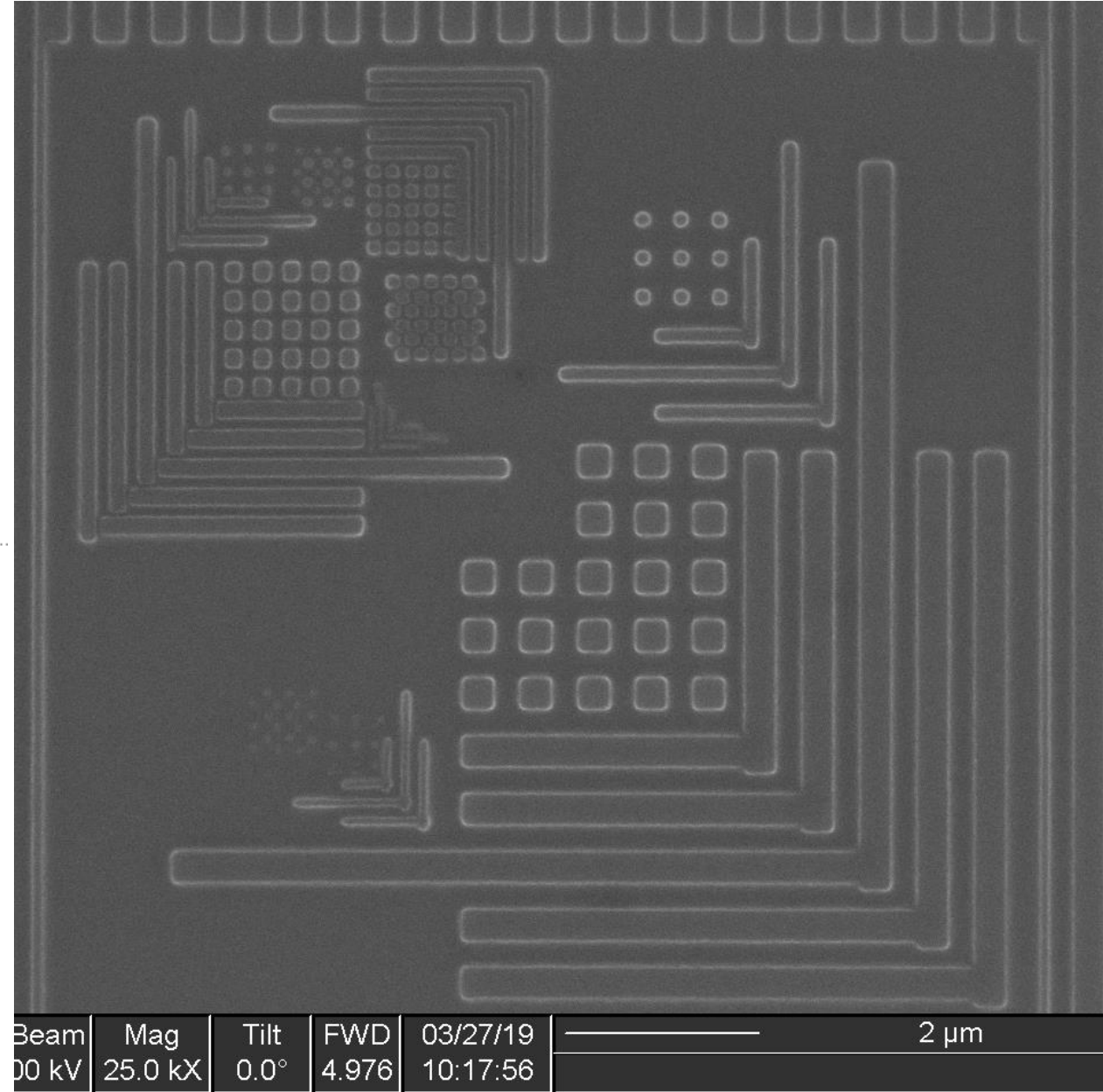
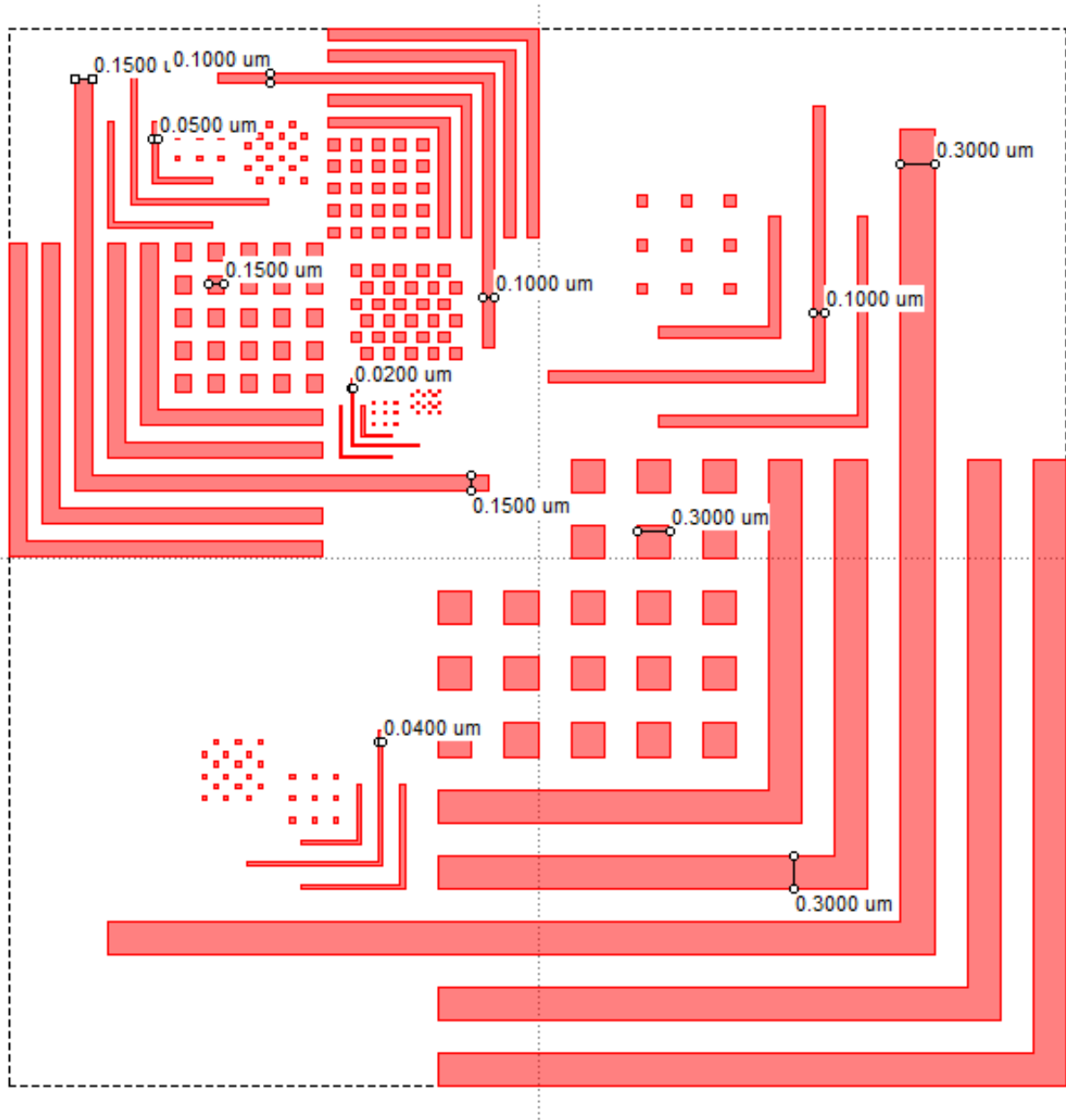


Resolution Test Pattern: 50% at 1.8

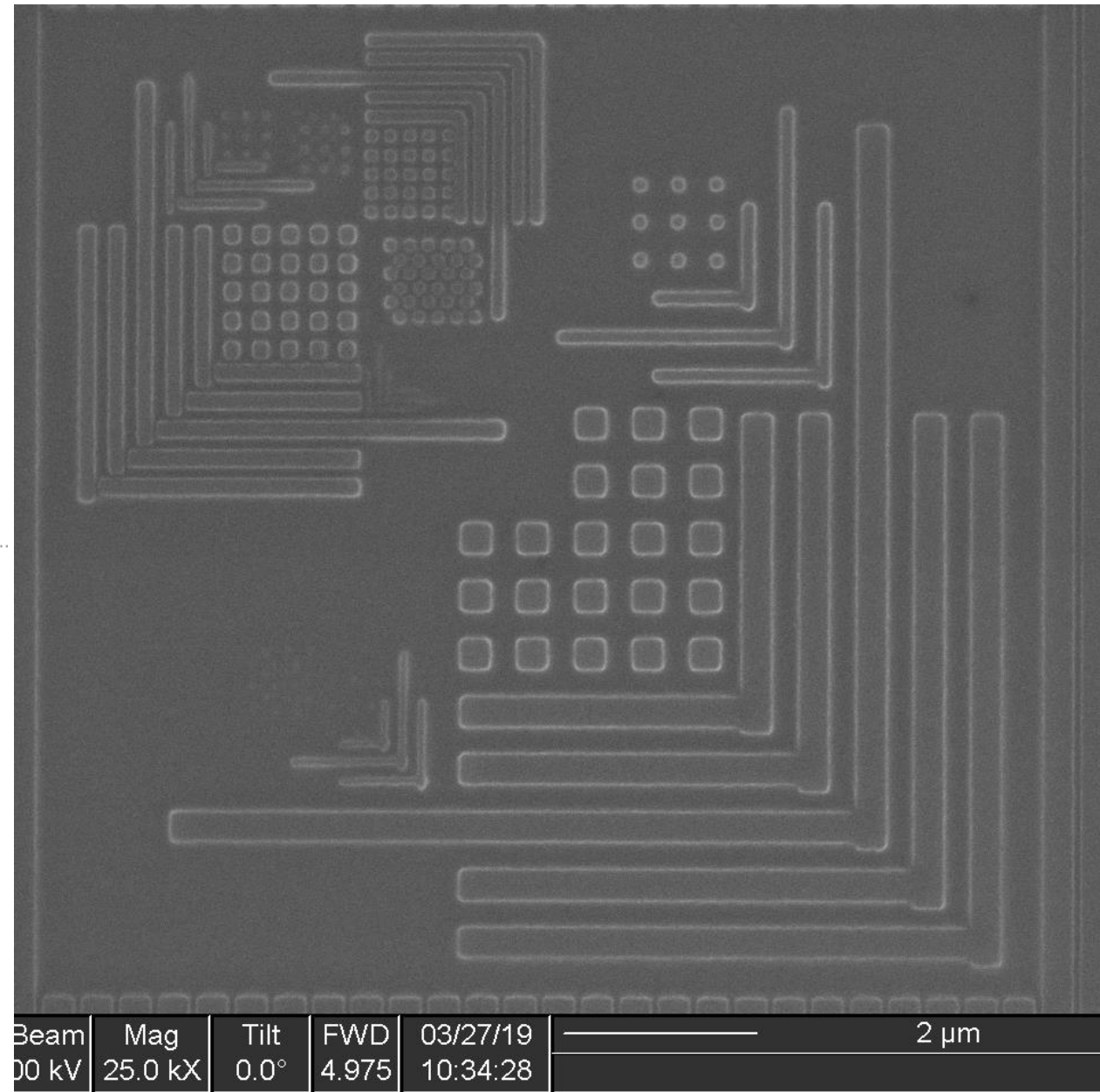
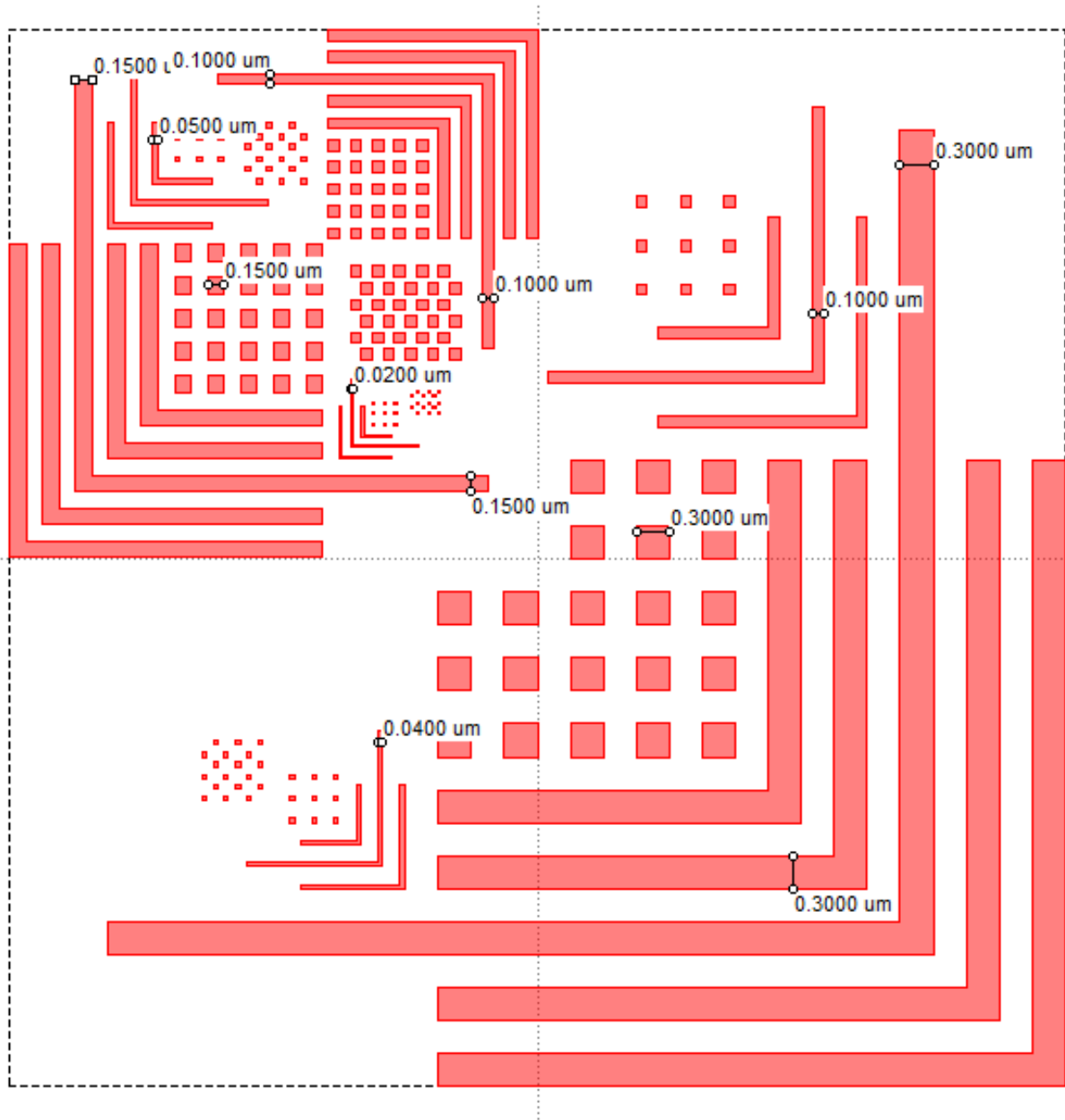


Beam	Mag	Tilt	FWD	03/27/19	2 μm
100 kV	25.0 kX	0.0°	4.977	10:25:18	

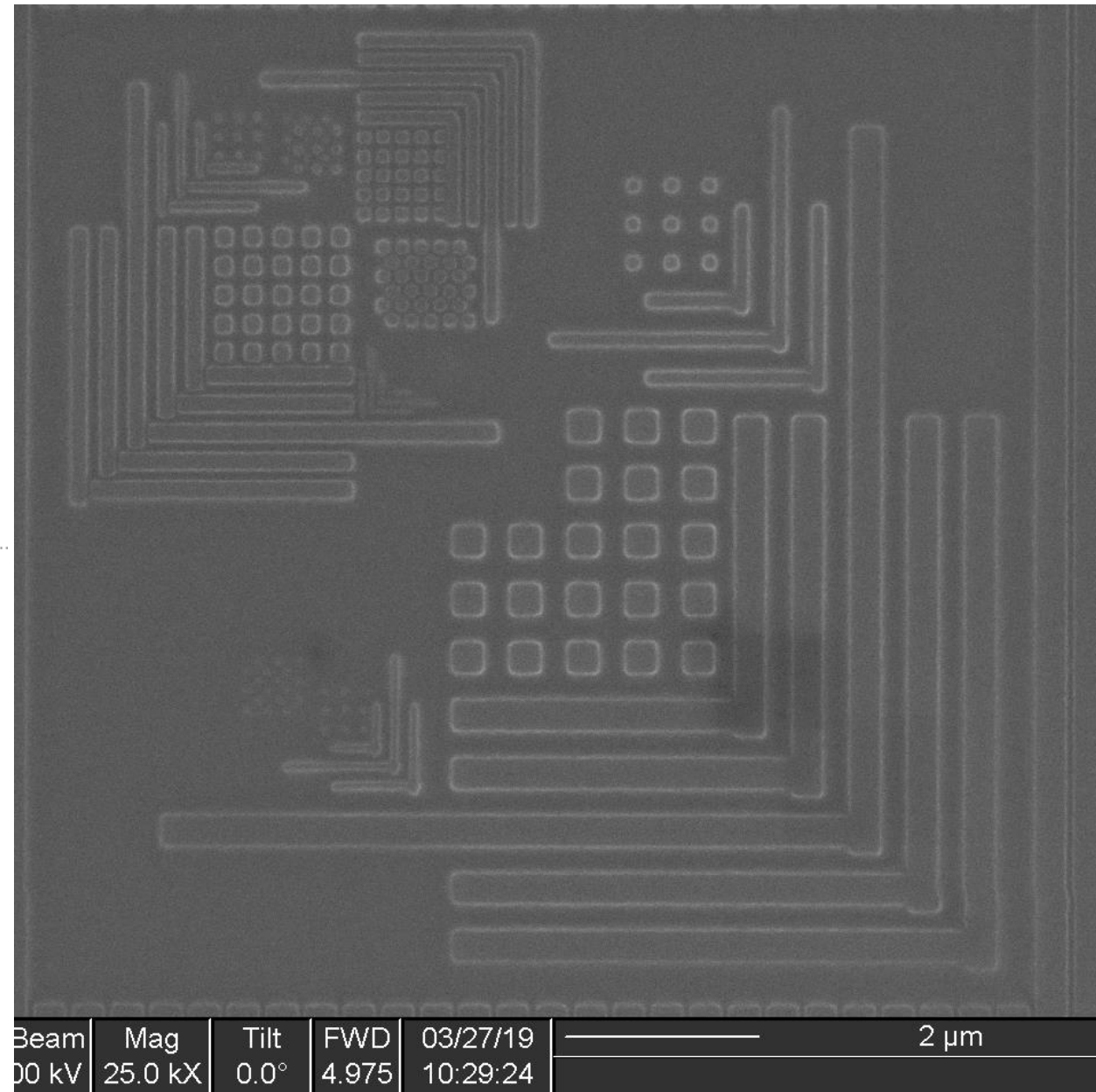
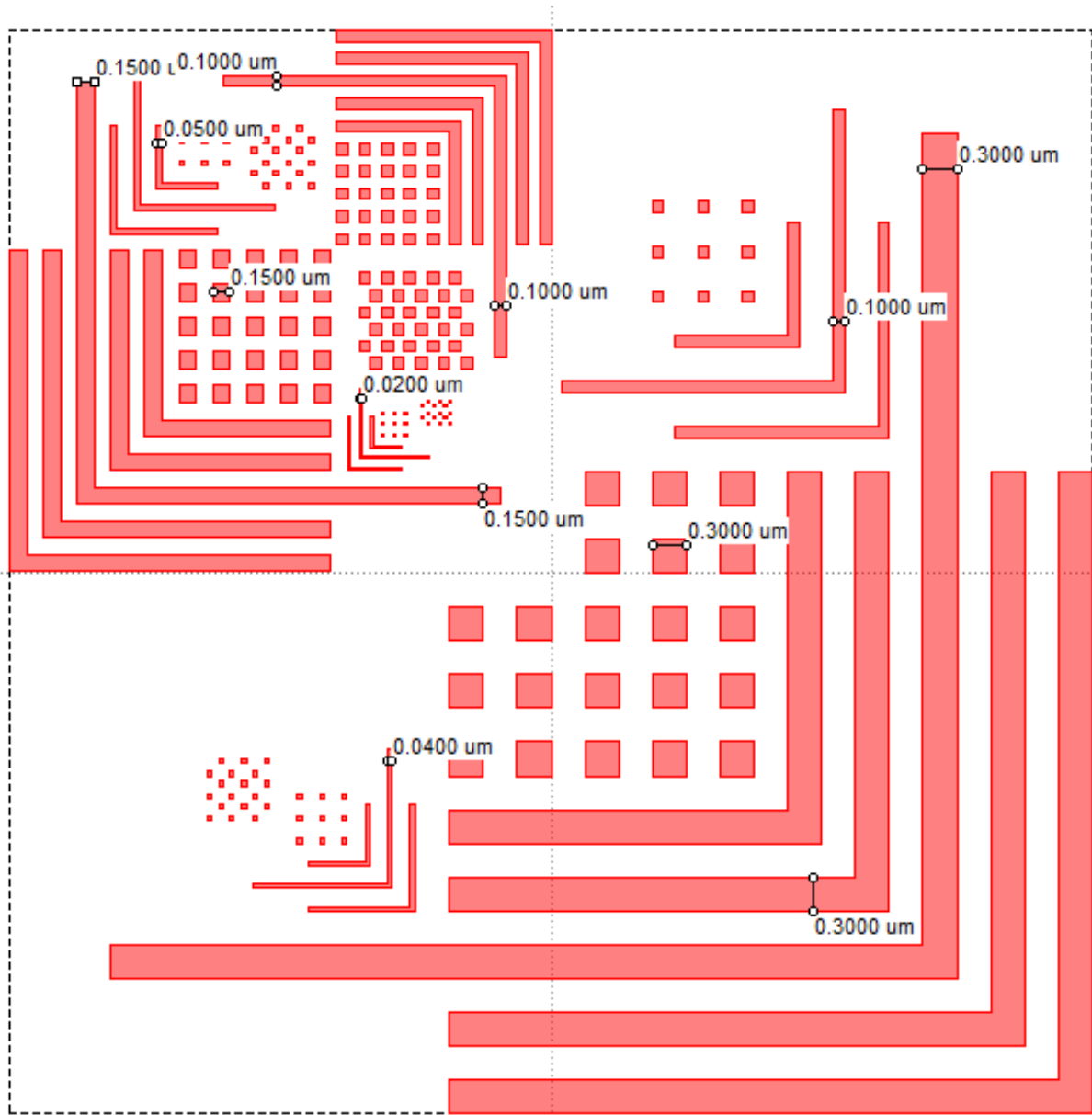
Resolution Test Pattern: 50% at 1.9



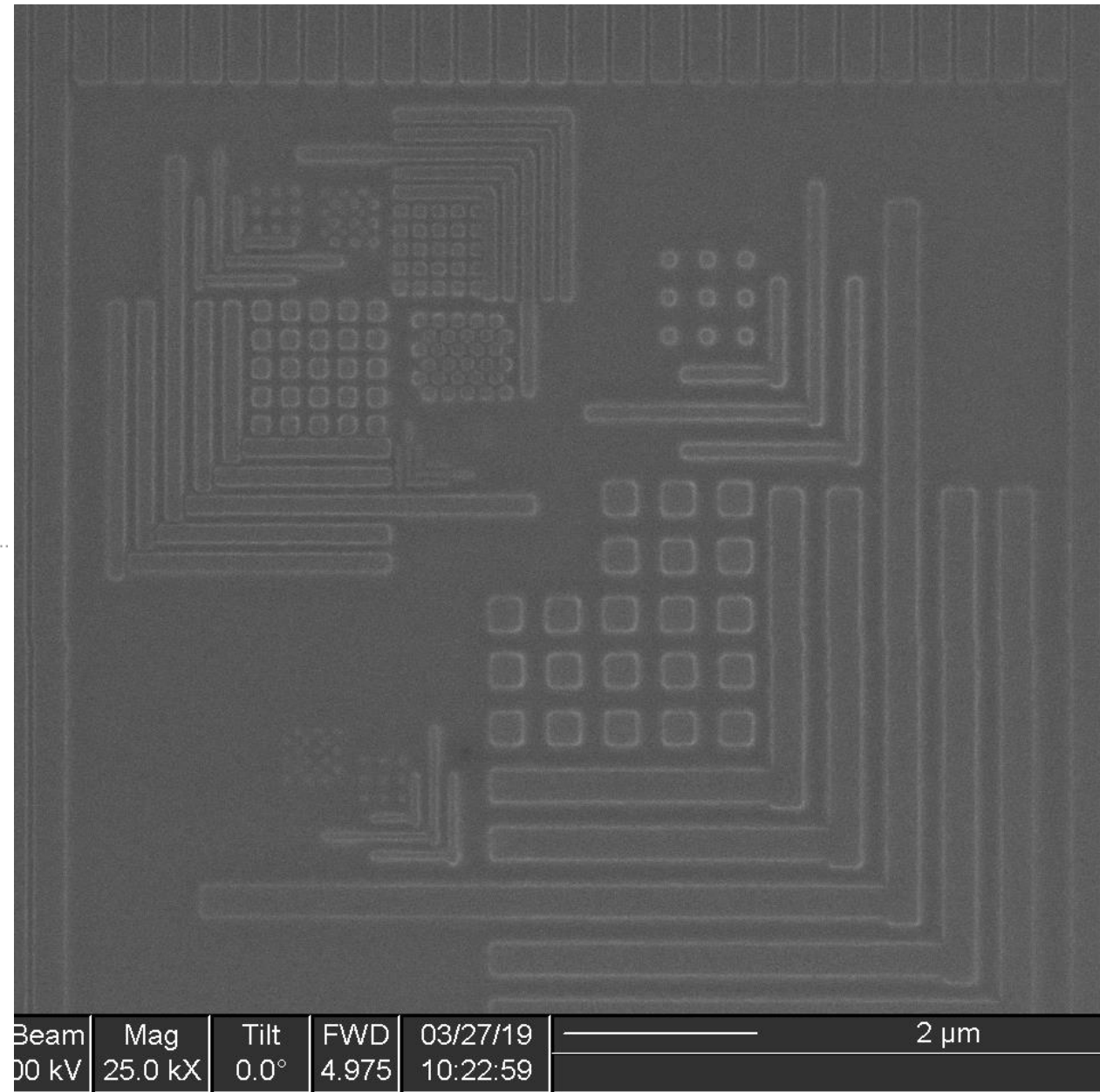
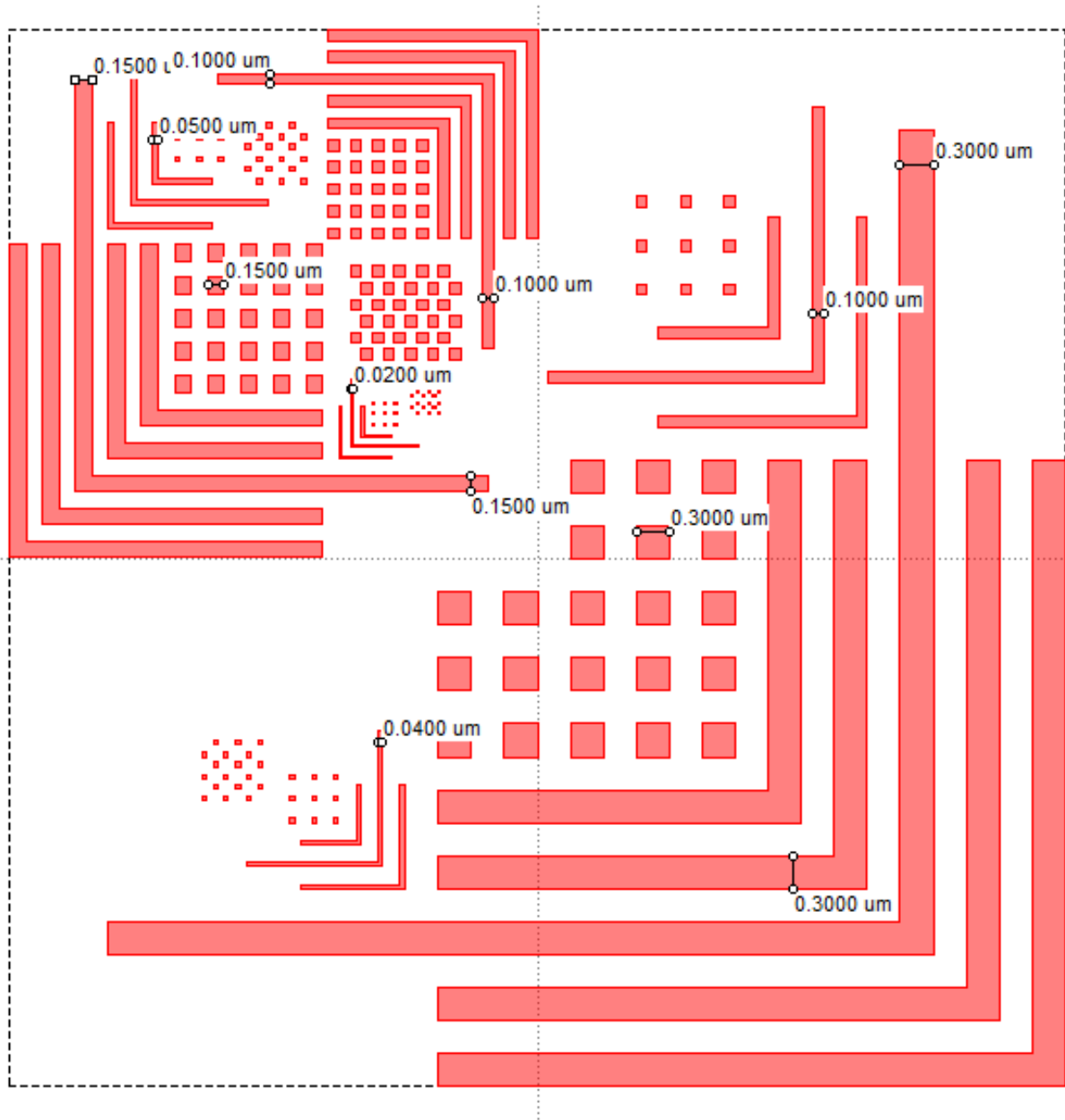
Resolution Test Pattern: 75% at 1.6



Resolution Test Pattern: 75% at 1.7



Resolution Test Pattern: 75% at 1.8



Beam	Mag	Tilt	FWD	03/27/19		
100 kV	25.0 kX	0.0°	4.975	10:22:59		2 μm