Plasma-Therm Standard DSE

Spool: 180.0°C
Lid: 150.0°C
Liner: 70.0°C
Electrode: 15.0°C

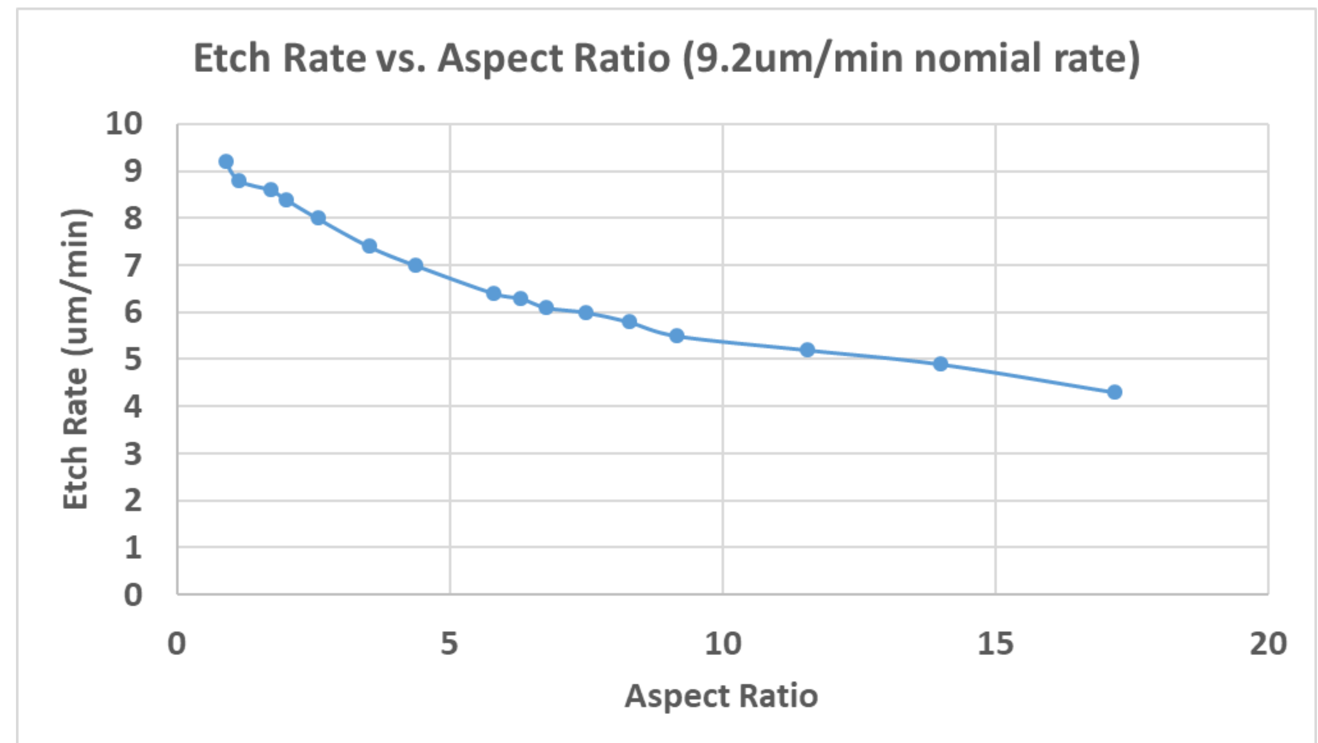
Helium Pressure: 6,000.0 mTorr

1) < Initial >
2) < Chuck >
3) Light
4) Dep
5) Etch A
6) Etch B
7) Loop 109 times
8) Cooldown
9) < Dechuck >
10) < End >

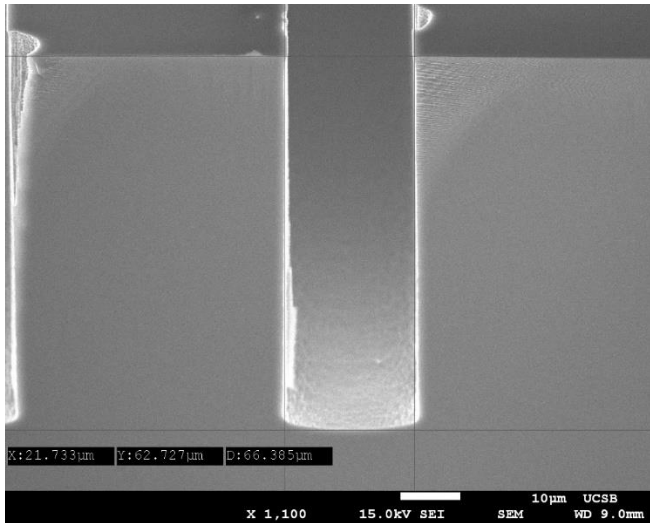
	1. < Initial >	2. < Chuck >	3. Light	4. Dep	5. Etch A	6. Etch B	7. Loop to 4	8. Cooldown	9. < Dechuck >	10. < End >
Duration	0:10.0		0:05.0	0:02.0	0:01.5	0:02.0	109 Iter. / 9:59	0:30.0		0:10.0
Pressure	1.0	20.0	20.0	25.0	40.0	60.0				1.0
T.V. Pos								100.0	100.0	
C_4F_8		75.0	75.0	150.0	↓ 150.0	↓ 150.0		0.0	0.0	
SF_6		↓ 150.0	↓ 150.0	↓ 150.0	150.0	250.0		0.0	0.0	
Ar		30.0	30.0	30.0	30.0	30.0		0.0	0.0	
LF Bias		0	500	11	200	11		0	0	
WF		1	1	1	1	1		1	1	
HF Bias		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
ICP		0	1,500	2,000	2,000	2,500		0	0	
Mode		Manual	Auto	Hold	Hold	Hold		Auto	Auto	
Load		30.0								
Tune		70.0								

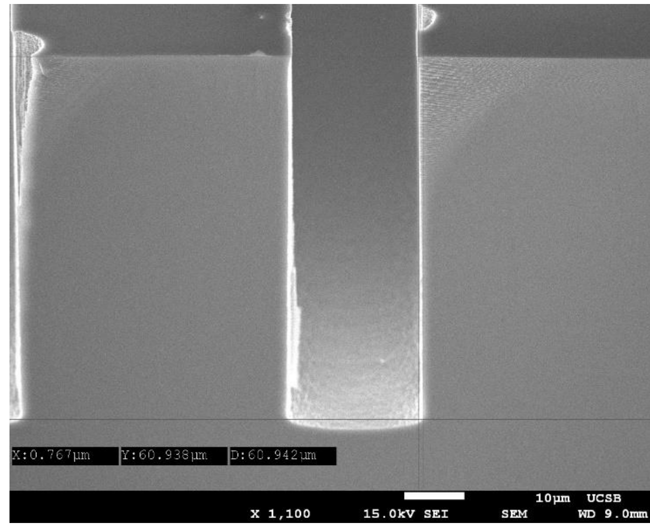
Aspect Ratio Depemdent Etch Rate

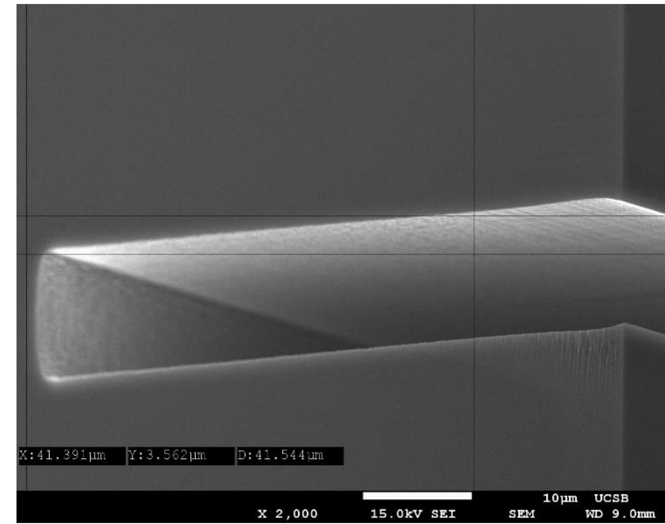
109 Cycles Std DSEIII Process
10 minutes
15% Open Area on 4” wafer.
Rate will lower for larger open area
~900nm PR etched
Nominal ER 9.2um/min
Nominal Selectivity ~100:1 Si:PR



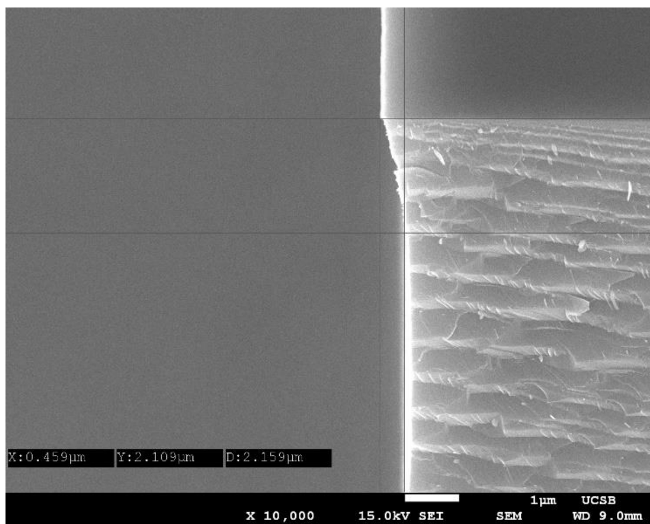
Etch Profiles







60 degree image: 20um trench: ~72um deep, sidewall angle: 99.6deg.



0.5um undercut at top