

Process flow title			Revision
Test wafers for Dielectric etcher tender 2025			1.0
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			Date of revision 18-Feb-25

Objective

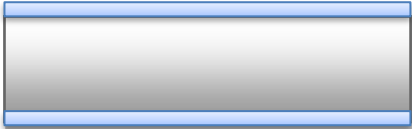
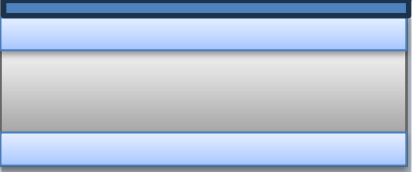
Batch name: DiE_T

Create wafers with 1.5 μm SiO₂ and a 100 nm chrome mask for etching tests in the oxide

Substrates

Substrate	Orient.	Size	Doping/type	Polish	thickness	Box	Purpose	#	Sample ID
Silicon	<100>	6"	na	SSP	625 $\pm$ 25 μm		Device wafers	25	DiE_T_1-50

Comments: Number of wafers is for illustration only

Figures			
Figure	Caption	Step	Figure
1	After SiO2 dep	2.1	
2	After Cr dep	3.1	
3	After DUV litho	4.4	
4	After barc and Cr etch	5.2	

Comments:Click here to enter text.

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Step Heading	Equipment	Procedure	Comments
1 Preparation			All wafers
1.1 Wafer selection	Wafer box	Take two boxes of 150 mm silicon wafers	
2 SiO₂ deposition			All wafers
2.1 SiO ₂ wet oxidation	Furnace C1	Place a test wafer in the center of the boat and place device wafers and e.g. test wafers equally distributed on each side of the test wafer. No space between wafers. Recipe: Wet1100, time:6h oxidation, 20 min annealing Target thickness: 1500±100nm	Measure oxide thickness on the Filmtech and note the result in the furnace log
3 Cr deposition			All wafers
3.1 Deposit 100 nm Cr	Lesker PC1 or Temescal 1 and 2	PC1: Make a batch process of 10 wafers at a time. Recipe: MDC PC1 Src3 DC Upstream Time: 300 s Pressure: 3 mTorr 60s pre-sputter Or Temescal 1+2: 16 min 40 s per wafer?	
4 DUV lithography			All wafers
4.1 Spinning barc 65 nm		Litho group	
4.2 Spinning DUV resist		NUV 2300-0.5 3000rpm (PAB:100dec 60sec), Tykkelse: 5-600 nm (sequence: 0035) Litho group	
4.3 DUV exposure		Lithogroup Reticle: Pegreticle (JMLI) – Tripple-D Focus offset: -0.08 Exposure 280 J/m ² 16 divided fields	
4.4 Post exposure bake and develop		PEB: 100 deg; 60 sec (sequence 3002) Dev: 60sec (sequence 1004)	
5 Dry Etch af Barc and Cr			All wafers
5.1 Barc etch	ICP Metal	Set temperature at 50 degrees: Recipe: 'Stab50 chamber clean20' on dummy Recipe: Barc etch with O ₂ Time: use end point: 24s-75s Time seems to be very dependent on chamber conditioning. Run: 'Chamber clean 10 min' between wafers (barc+Cr etch)	
5.2 Cr etch	ICP Metal	Recipe: Cr etch (@ 50C) Time: use end point ~8 min Run: 'Chamber clean 10 min' between wafers (barc+Cr etch) on dummy When done run: 'stab20 postchlorine chamber clean 20' on dummy wafer	

Objective 1

 Batch name: Process template 1

Substrates 1

 Substrate 1

 Orient..... 1

 Size..... 1

 Doping/type..... 1

 Polish 1

 thickness..... 1

 Box 1

 Purpose..... 1

 # 1

 Sample ID..... 1

Figures..... 2

 Figure 2

 Caption 2

 Step..... 2

 Figure 2

 Step Heading 3

 Equipment 3

 Procedure 3

 Comments 3

1 Preparation 3

 1.1 Wafer selection 3

2 SiO₂ deposition 3

 2.1 SiO₂ wet oxidation 3

3 Cr deposition..... 3

 3.1 Deposit 100 nm Cr 3

4 DUV lithography 3

 4.1 Spinning barc 65 nm 3

 4.2 Spinning DUV resist 3

 4.3 DUV exposure 3

 4.4 Post exposure bake and develop..... 3

5 Dry Etch af Barc and Cr..... 3

 5.1 Barc etch..... 3

 5.2 Cr etch 3