TEAM _____

Engr 1202 ECE Lab
Micro Planar Antenna Traveler

OPERATION	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	PROCESS
NAME	WF 1	WF 2	WF 3	WF 4	WF 5	WF 6	WF 7	WF 8	DESCRIPTION
Starting Material									Silicon 100mm or other substrate
Clean									Clean H2O2 / H2SO4 2:3 for 10 min Use 100ml:150ml for single wafer
									Rinse - DIH2O - 5 min minimum
									Dip - 10:1 - DIH2O/HF - 10 sec
									Rinse - DIH2O - 15 minutes max Record resistivity _____
									Dry - Rinser/Dryer - Dry only cycle
Dielectric Formation									Use 1100C oxidation furnace # 6
									Load wafers, N2 running
									5' N2 to stabilize temperature
									5' O2
									30' O2 + H2 (steam)
									5' O2
									Unload, N2 running
Deposit Conductor									Conductor material _____
									Load conductor if necessary. Record machine name/number _____
									Start pump down cycle Record time at start _____
									Begin deposition Record pressure at start _____
									Record final thickness _____A
									Vent chamber and unload wafers
Create Mask									Create autocad drawing
									Array drawing and print directly on to ink-jet transparency
Trim Mask									Trim mask to about 105 mm diameter
Conductor									Spin photoresist - 60 sec @ 4K rpm - Microposit 1813 photoresist
Photolithography									Soft bake - 60 sec hotplate @ 115C
									Align - align wafer flat to stop on wafer chuck
									Expose - 10 sec UV @ 150 watts
									Develop - spray developer -standard process
									Inspect - lab manager or TA Strip PR and repeat if necessary
									Hard bake - 10' @ 90C (optional)
Conductor Etch									Etch with appropriate etch solution. Record etch solution _____
									Rinse in DIH2O for 10 min
									Dry - Rinser/Dryer - Dry only cycle
									Inspect - lab manager or TA
PR strip									5' Acetone + 5' Methanol + 5' DIH2o rinse + N2 dry
Dice									Saw cut with microautomation 1100 diamond saw
									Clean and dry