FIG.1

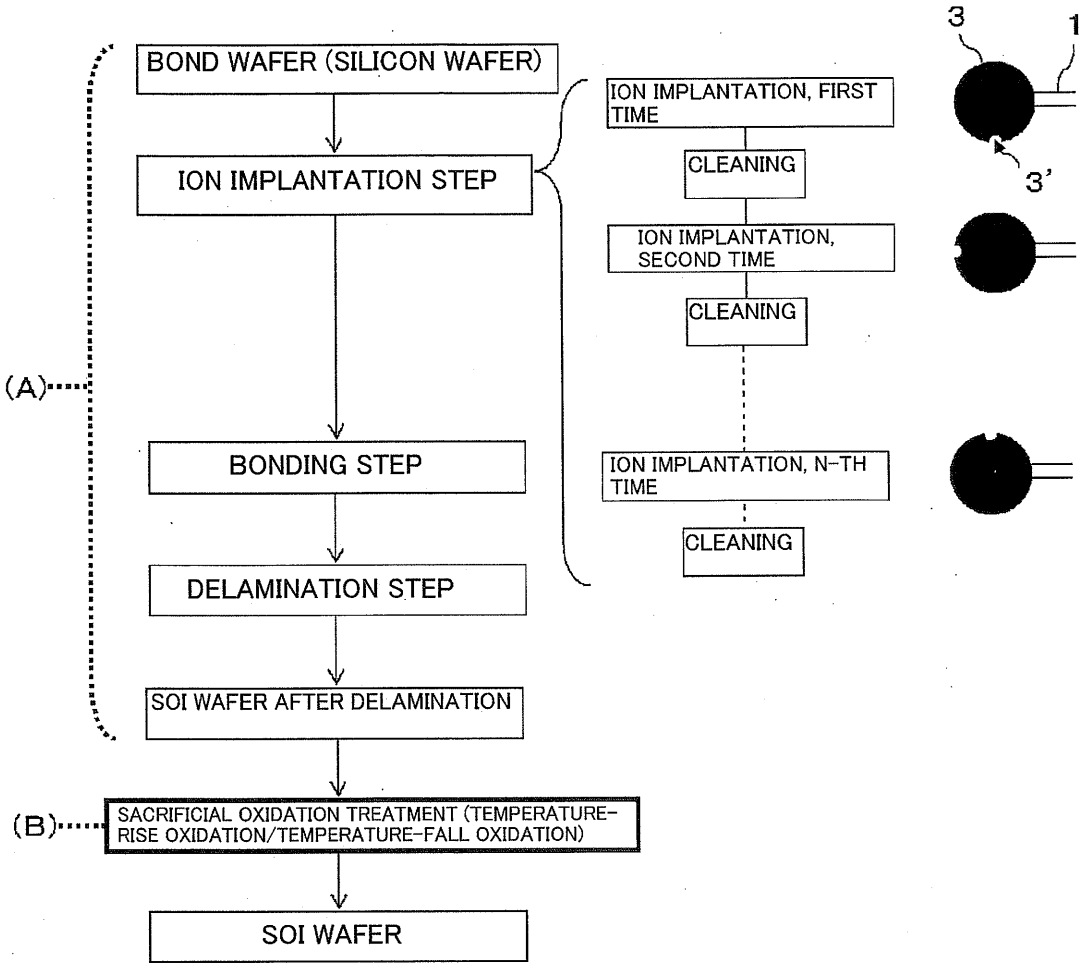

BOND WAFER (SILICON WAFER)
ION IMPLANTATION STEP
ION IMPLANTATION, FIRST TIME
CLEANING
ION IMPLANTATION, SECOND TIME
CLEANING
ION IMPLANTATION, N-TH TIME
CLEANING
BONDING STEP
DELAMINATION STEP
SOI WAFER AFTER DELAMINATION
(A)
(B)
SACRIFICIAL OXIDATION TREATMENT (TEMPERATURE-RISE OXIDATION/TEMPERATURE-FALL OXIDATION)
SOI WAFER
3
1
3'

FIG.2

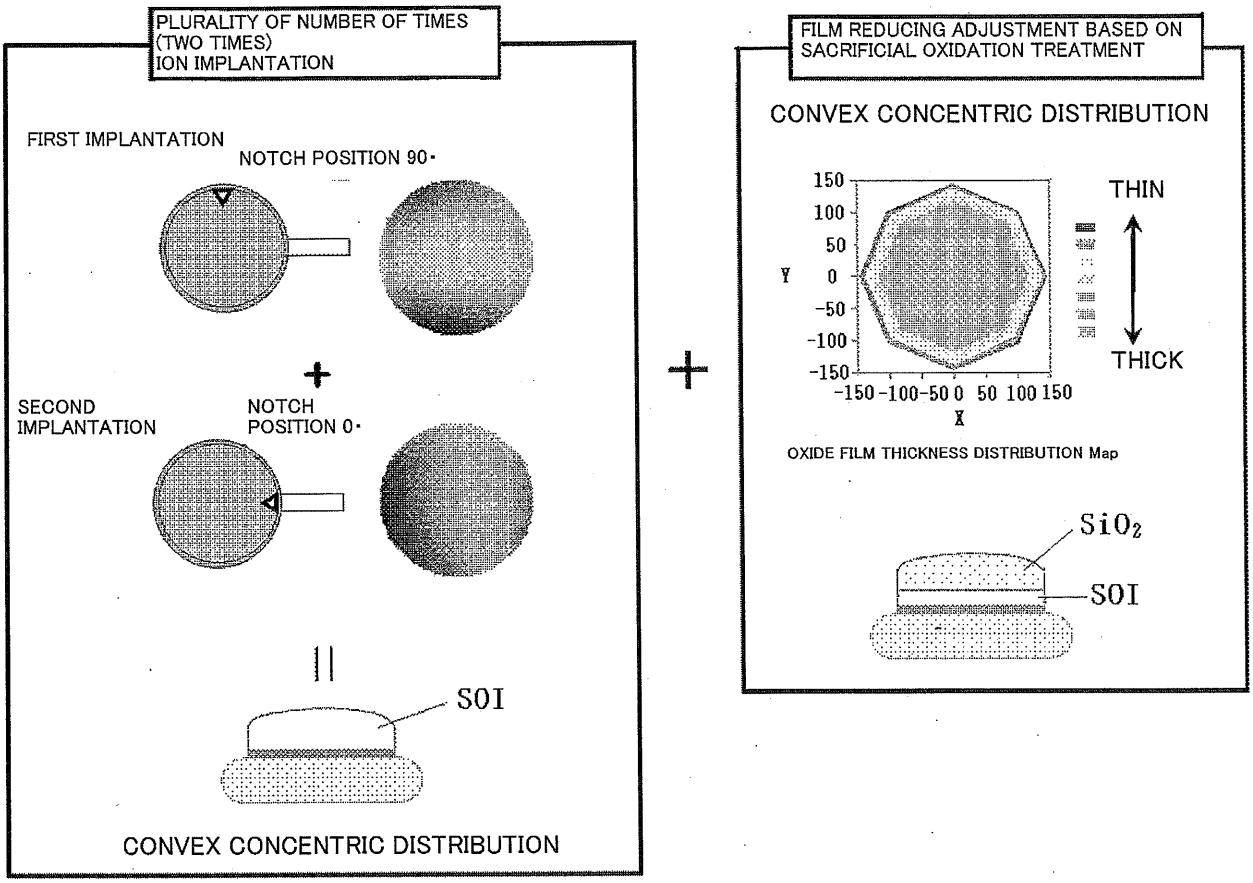
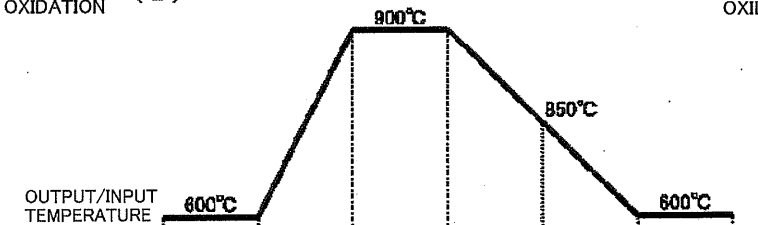

PLURALITY OF NUMBER OF TIMES
(TWO TIMES)
ION IMPLANTATION
FIRST IMPLANTATION
NOTCH POSITION 90·
SECOND
IMPLANTATION
NOTCH
POSITION 0·
SOI
CONVEX CONCENTRIC DISTRIBUTION
FILM REDUCING ADJUSTMENT BASED ON
SACRIFICIAL OXIDATION TREATMENT
CONVEX CONCENTRIC DISTRIBUTION
150
100
50
Y 0
-50
-100
-150
-150 -100 -50 0 50 100 150
X
THIN
THICK
OXIDE FILM THICKNESS DISTRIBUTION Map
SiO2
SOI

FIG.3

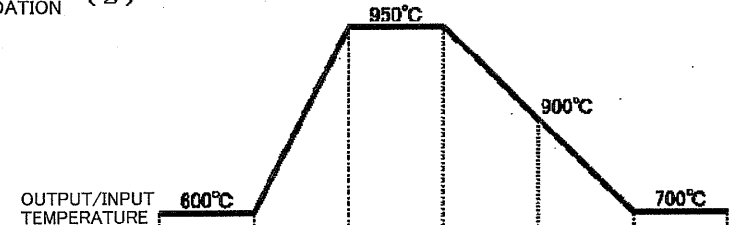
EXAMPLE 1

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	H2/O2	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

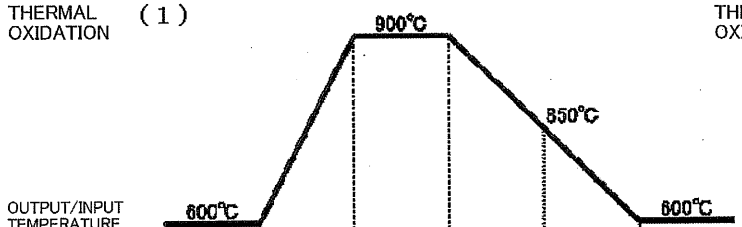
THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

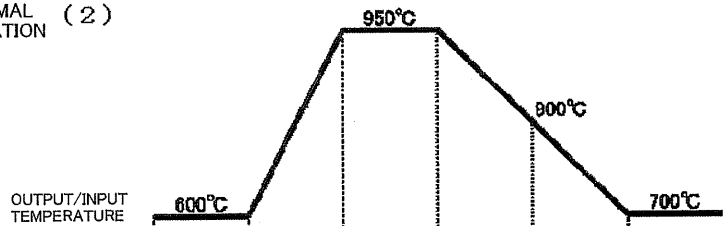
EXAMPLE 2

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

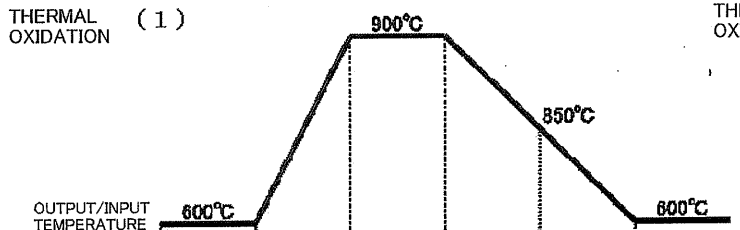
THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	H2/O2	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

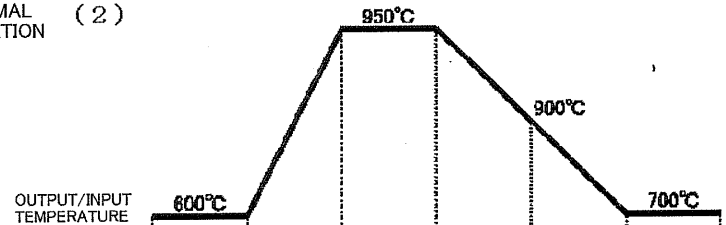
COMPARATIVE EXAMPLE

THERMAL OXIDATION (1)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

THERMAL OXIDATION (2)



ATMOSPHERIC GAS	Ar	Ar	H2/O2	Ar	Ar	Ar
RISING/FALLING TEMPERATURE	–	5℃/min	–	1℃/min	1℃/min	–

FIG.4

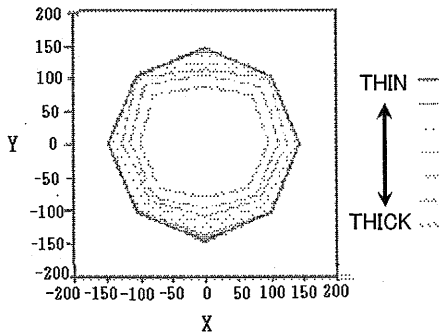
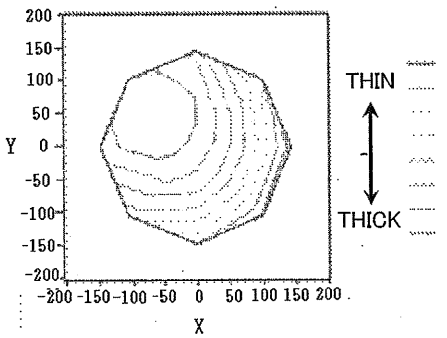
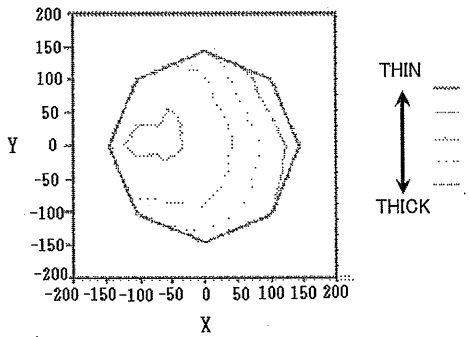
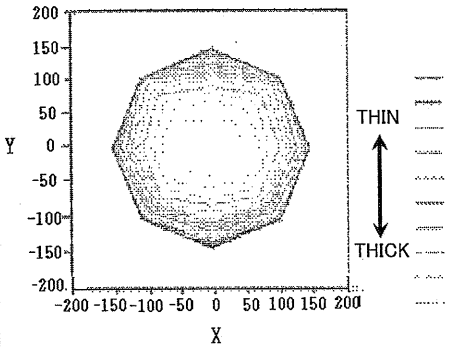
	THERMAL OXIDATION (1)	THERMAL OXIDATION (2)
EXAMPLE 1	 Range:1.1nm (TEMPERATURE-FALL OXIDATION)	 Range:0.9nm (PREDETERMINED TEMPERATURE OXIDATION)
EXAMPLE 2	 Range:0.4nm (PREDETERMINED TEMPERATURE OXIDATION)	 Range:1.4nm (TEMPERATURE-FALL OXIDATION)

FIG.5

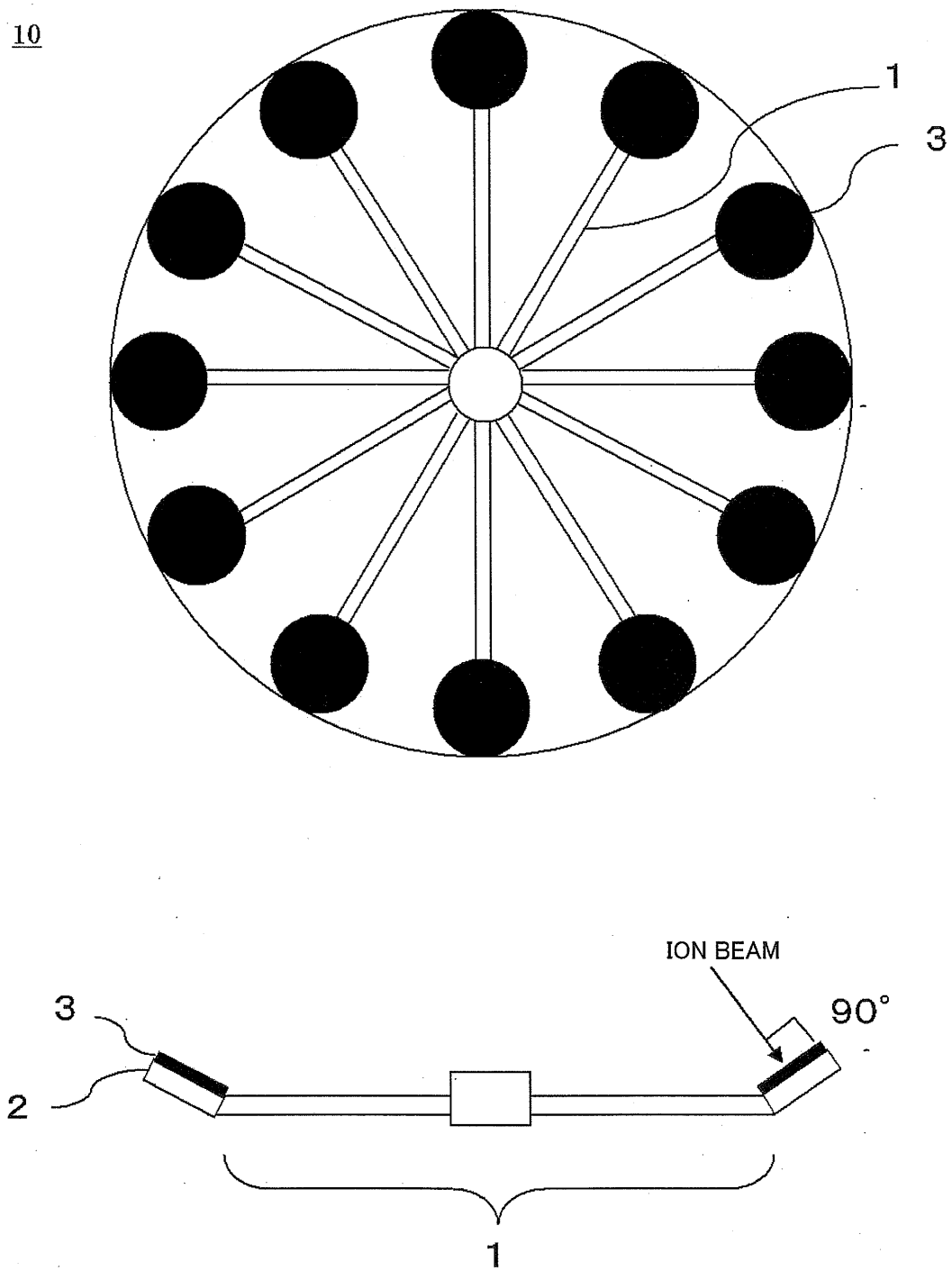
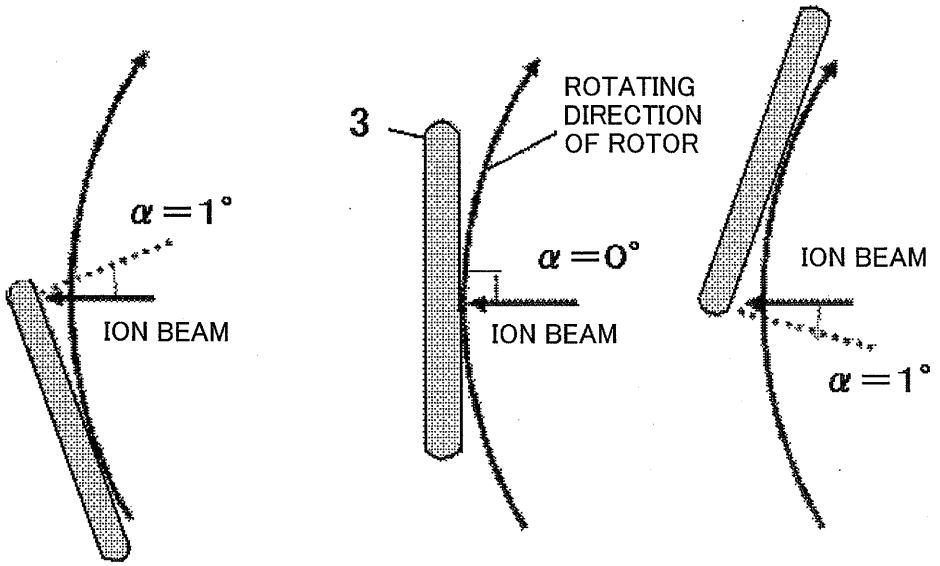


FIG.6


α＝1°
ION BEAM
3
ROTATING
DIRECTION
OF ROTOR
α＝0°
ION BEAM
ION BEAM
α＝1°