



## Field of view

5000x : 60\*50μm  
 10000x: 30\*25μm  
 15000x: 20\*17μm

## Test Pattern

Standard etching(Yellow)  
 1: filled square box  
 2: filled circle  
 3-6: line

Platinum deposition(Green)  
 7: filled square box  
 8: filled circle  
 9-12: line

Insulator deposition(Red)  
 13: filled square box  
 14: filled circle  
 15-18: line

# Pattern file configuration: \*.pat (See the attached “test.pat”)

[Pattern\_Summary]

Version=2.00

Patterns=18

[Pattern\_1]

Name=FilledBox

X=1.989062

Y=2.018750

CenterX=-12.231250

CenterY=-10.093750

Type=4

Beam=1

MaterialFile=c:\xp\Pattern\si.mtr

Depth=0.500000

Dwell=0.000001000

Overlap=50.000000

Time=132.847452

GIS=0

EPD=0

Rotation=0.000000

PixelsPerMicron=134.736847

ScanType=1

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[Pattern\_8]

Name=Circle

InnerRadius=0.029687

OuterRadius=1.187500

CenterX=-0.415625

CenterY=-4.631250

Type=7

Beam=1

MaterialFile=c:\xp\Pattern\pt.mtr

Depth=0.500000

Dwell=0.000000400

Overlap=0.000000

Time=44.530528

GIS=1

EPD=0

Rotation=0.000000

PixelsPerMicron=134.736847

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[Pattern\_15]

Name=Line

L=2.197677

Angle=-88.451842

CenterX=7.095312

CenterY=2.998437

Type=2

Beam=1

MaterialFile=c:\xp\Pattern\idep2.mtr

Depth=0.500000

Dwell=0.000000200

Overlap=-150.000000

Time=0.712493

GIS=2

EPD=0

Rotation=0.000000

PixelsPerMicron=134.736847

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;Total # of patterns

;Pattern number

;Type- FilledBox/Circle/Line

;size, x(um)

;size, y(um)

;center position, x

;center position, y

;Type-4:filled box/7:circle/2:line

;beam type-1:ion beam/2:electron beam

;Material file-si.mtr:etching/pt.mtr:pt dep./idep2.mtr:insulator dep.

;depth(um)

;dwell time-0.000001:si.mtr/0.0000004:pt.mtr/0.0000002:idep2.mtr

;overlap-50:si.mtr/0:pt.mtr/-150:idep2.mtr

;total process time (see note)

;GIS operation-0:si.mtr/1:pt.mtr/2:idep2.mtr

;Pixels per micron-67.368423:5000x/134.736847:10000x/202.105255:15000x

;default for circle

;radius

;length

;angle from horizontal line

Note: depth and time calculator

Feature type	Dimension (um)	Depth (um)	Etching/deposition rate(um3/nC)	Current (pA)	Time (sec)
Filled box	X: size, x Y: size, y	Z	Note: si.mtr: 0.15 um3/nC pt.mtr: 0.5um3/nC idep2.mtr: 0.3um3/nC	A	=X*Y*Z*1000/E/A
Circle	R: outer radius				=3.14*R^2*Z*1000/E/A
Line	L: length				=L*0.02*Z*1000/E/A (single pixel line=20nm)