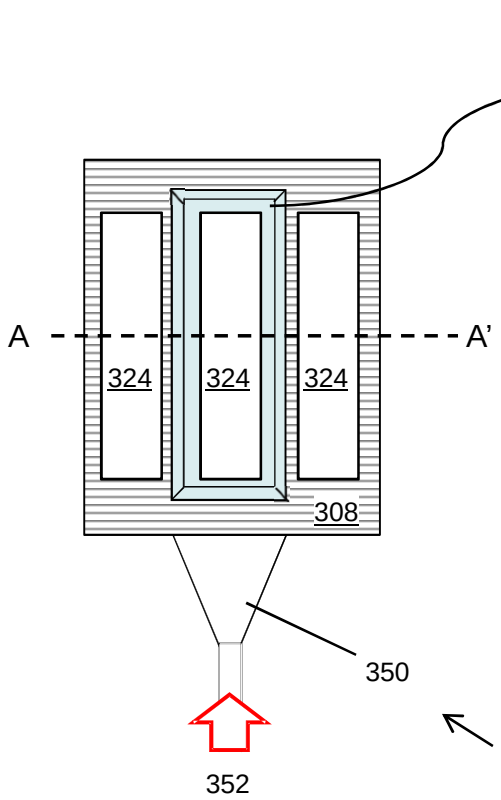


Figure 3A

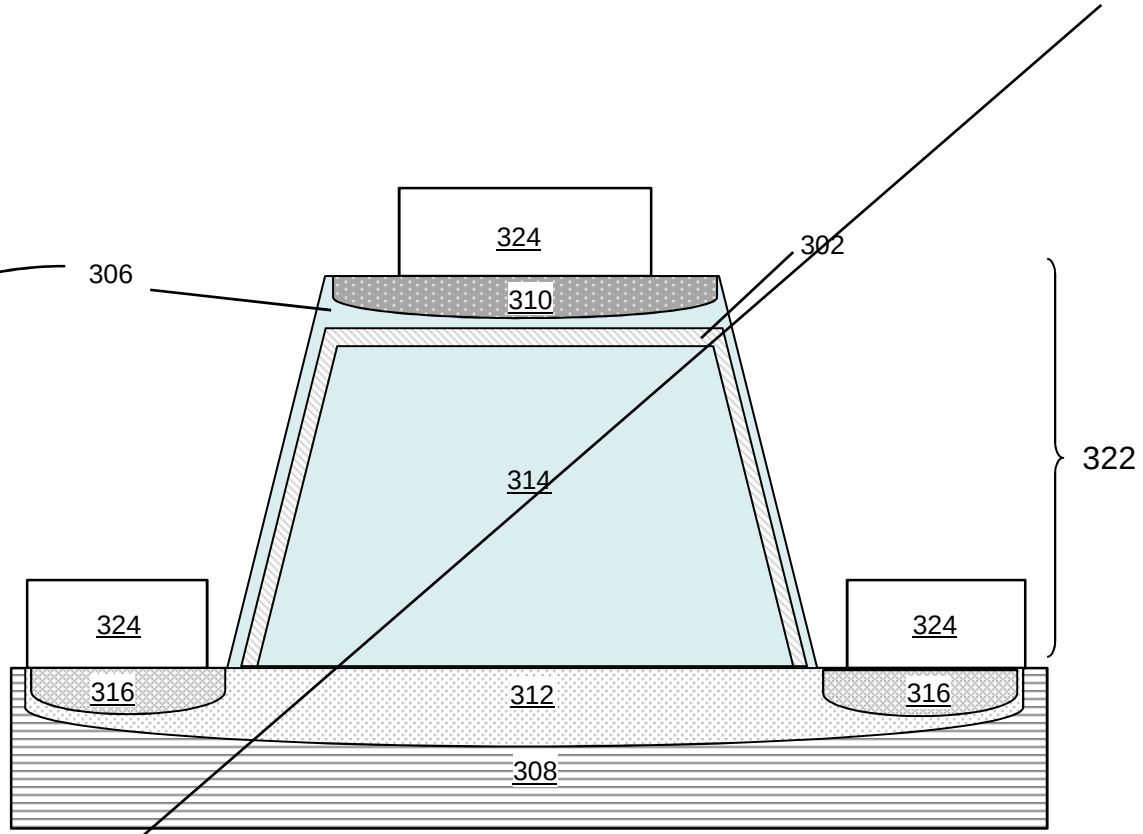


Figure 3B

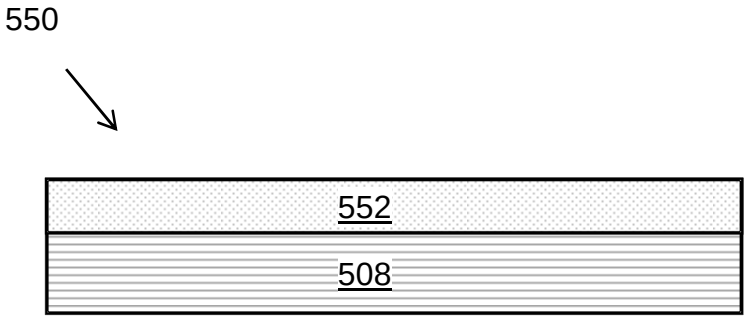


Figure 5A

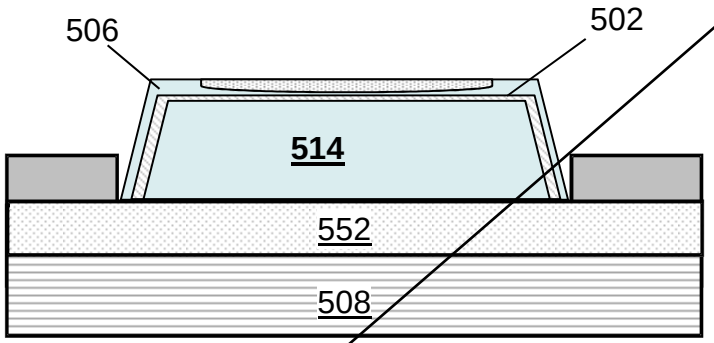


Figure 5C

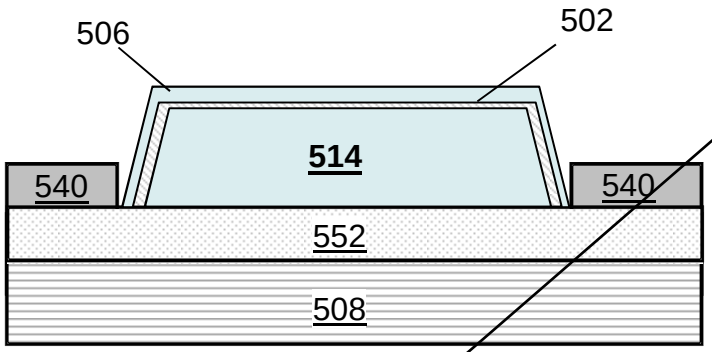


Figure 5B

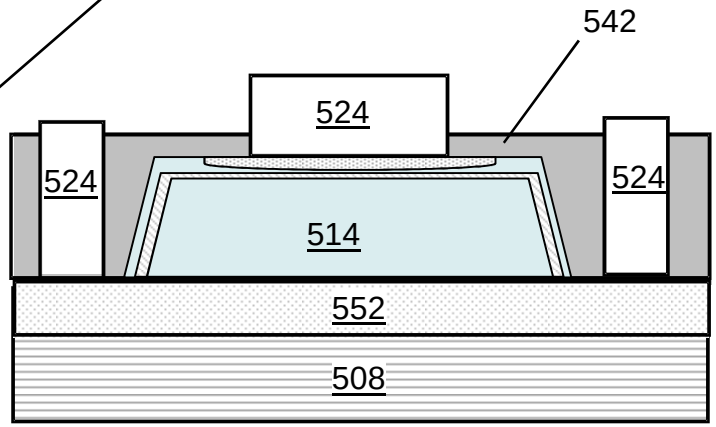


Figure 5D

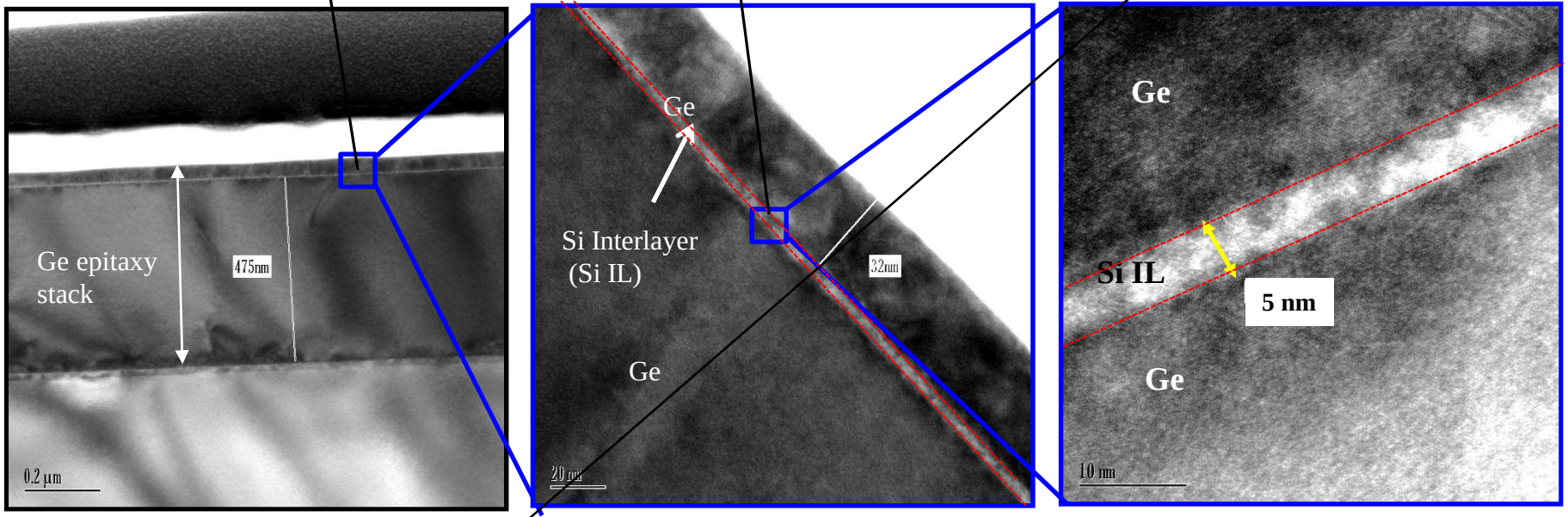


Figure 6A

Figure 6B

Figure 6C

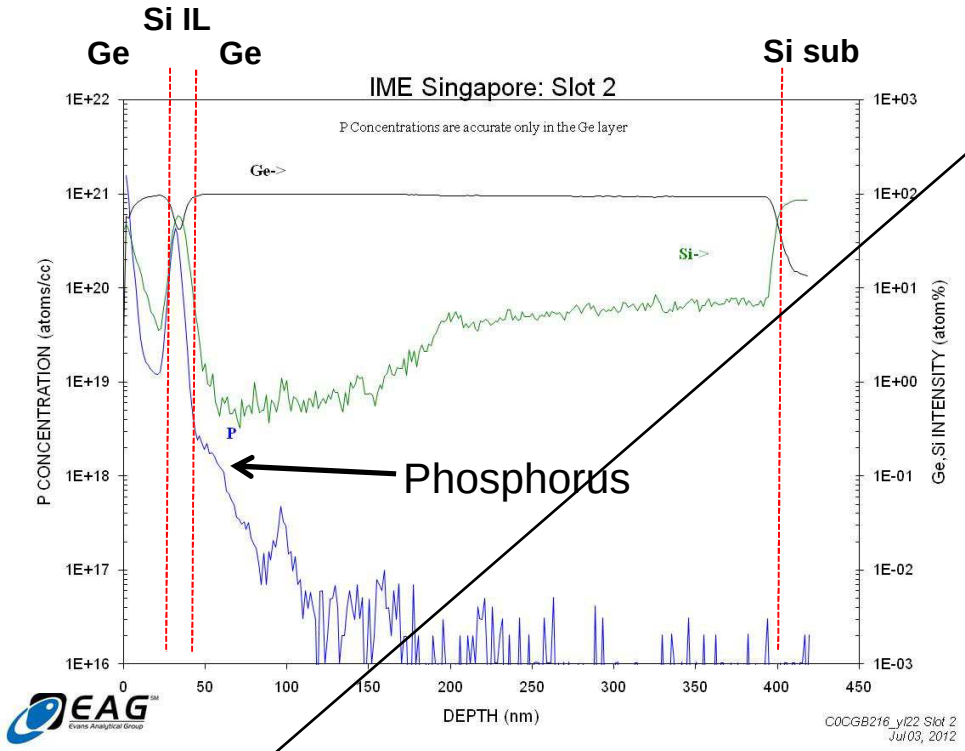

Si IL
Ge
Ge
Si sub
IME Singapore: Slot 2
P Concentrations are accurate only in the Ge layer
Ge->
Si->
P
Phosphorus
P CONCENTRATION (atoms/cc)
Ge,Si INTENSITY (atom%)
DEPTH (nm)
1E+22
1E+21
1E+20
1E+19
1E+18
1E+17
1E+16
1E+03
1E+02
1E+01
1E+00
1E-01
1E-02
1E-03
0
50
100
150
200
250
300
350
400
450
EAG
Evans Analytical Group
C0CGB216_yl22 Slot 2
Jul 03, 2012

Figure 7A

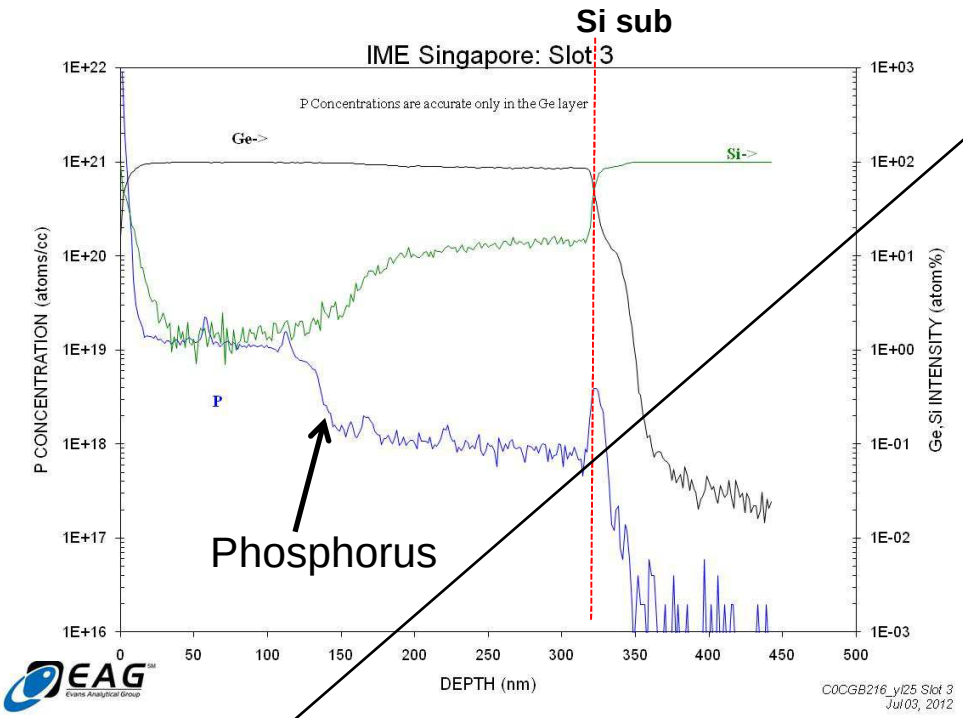

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Si->
P
Phosphorus
P CONCENTRATION (atoms/cc)
Ge,Si INTENSITY (atom%)
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1E+22
1E+21
1E+20
1E+19
1E+18
1E+17
1E+16
1E+03
1E+02
1E+01
1E+00
1E-01
1E-02
1E-03
0
50
100
150
200
250
300
350
400
450
500
EAG
Evans Analytical Group
C0CGB216_yl25 Slot 3
Jul 03, 2012

Figure 7B

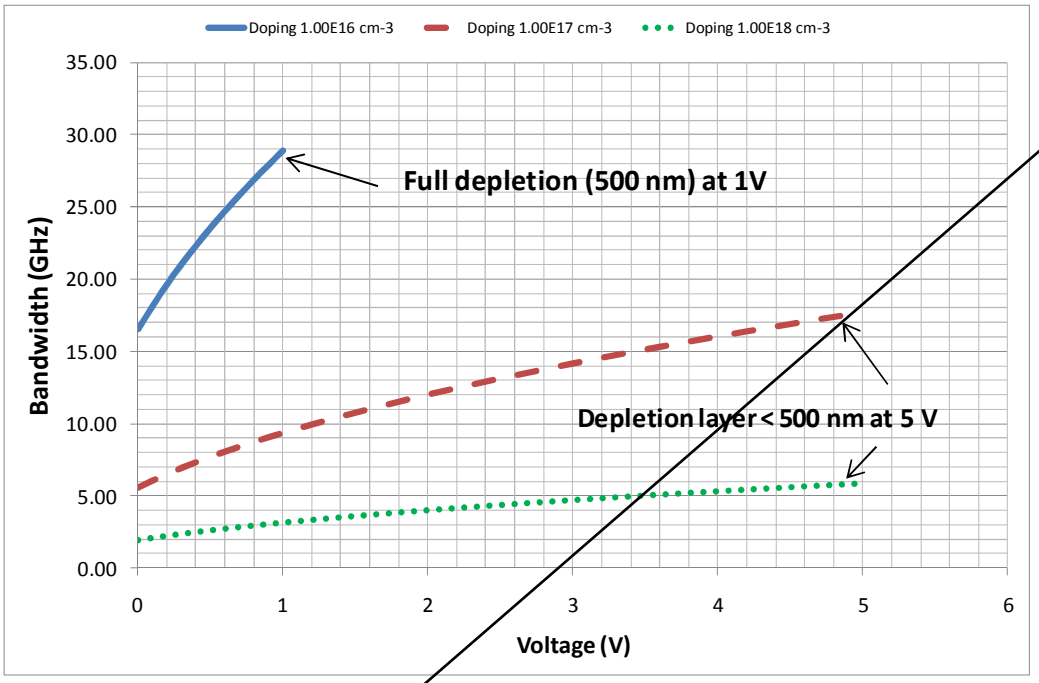

Doping 1.00E16 cm-3
Doping 1.00E17 cm-3
Doping 1.00E18 cm-3
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Bandwidth (GHz)
0
1
2
3
4
5
6
Voltage (V)
Full depletion (500 nm) at 1V
Depletion layer < 500 nm at 5 V

Figure 8

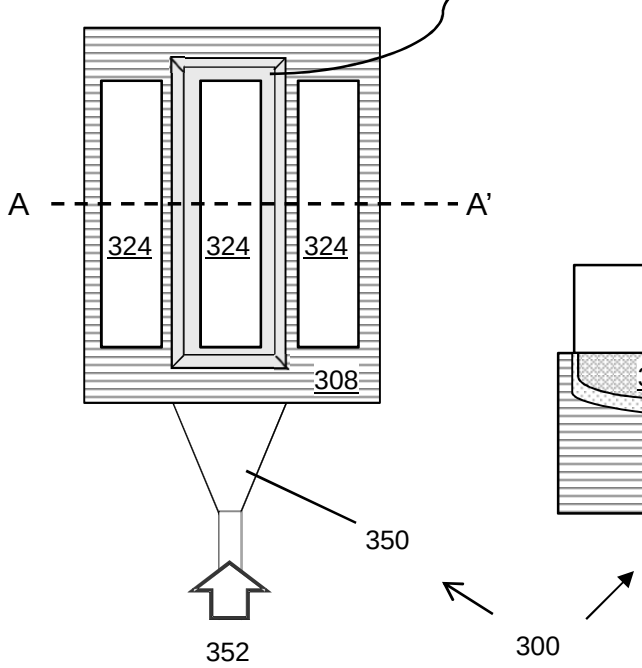


Figure 3A

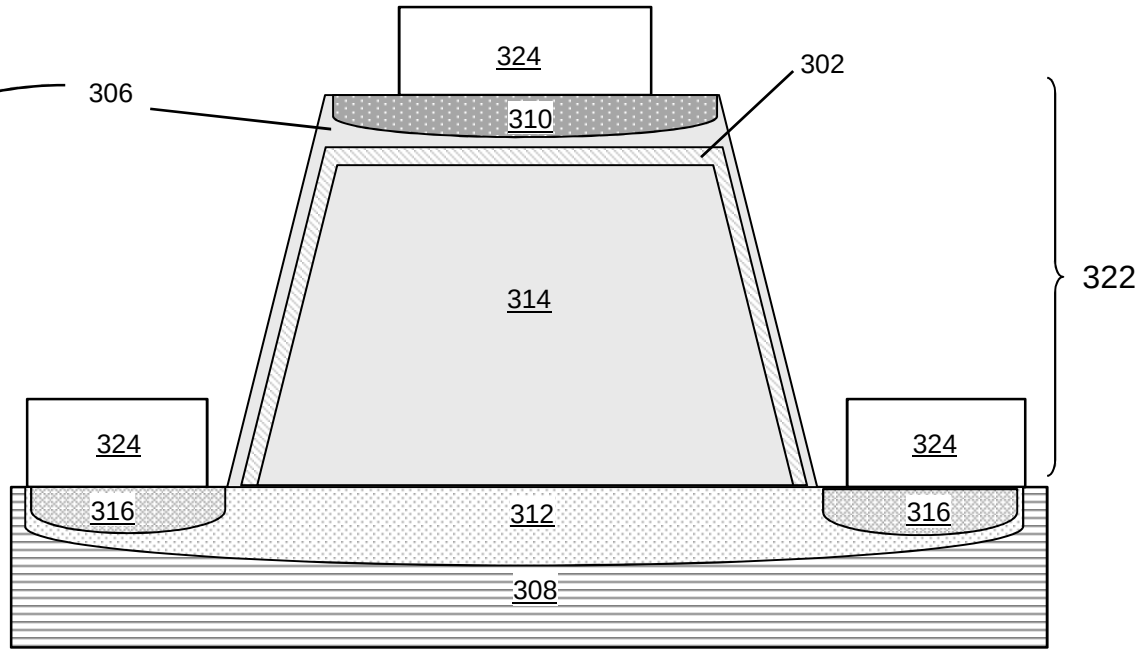


Figure 3B

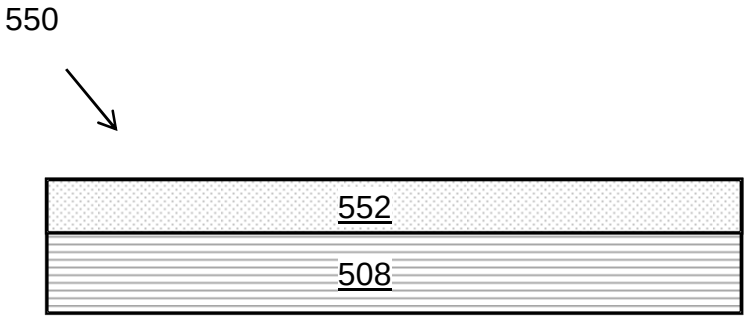


Figure 5A

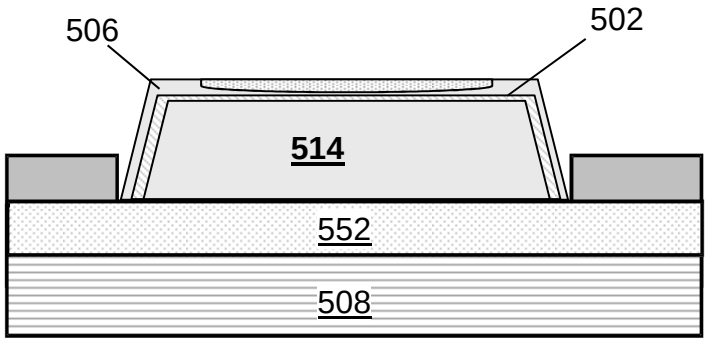


Figure 5C

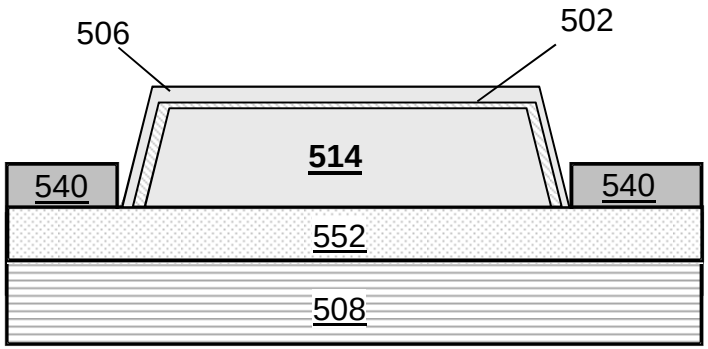


Figure 5B

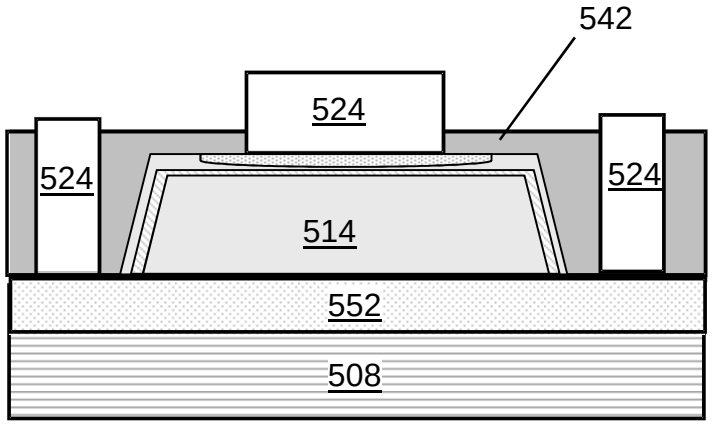


Figure 5D

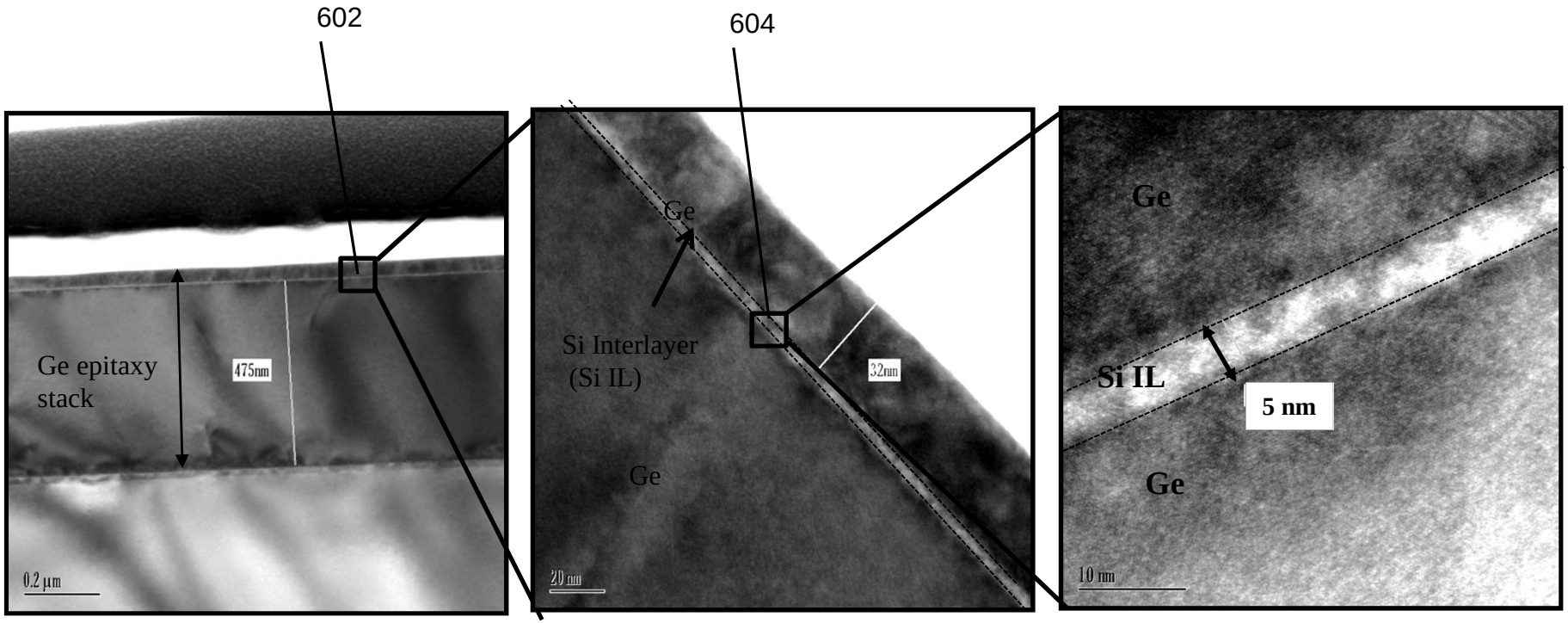


Figure 6A **Figure 6B** **Figure 6C**

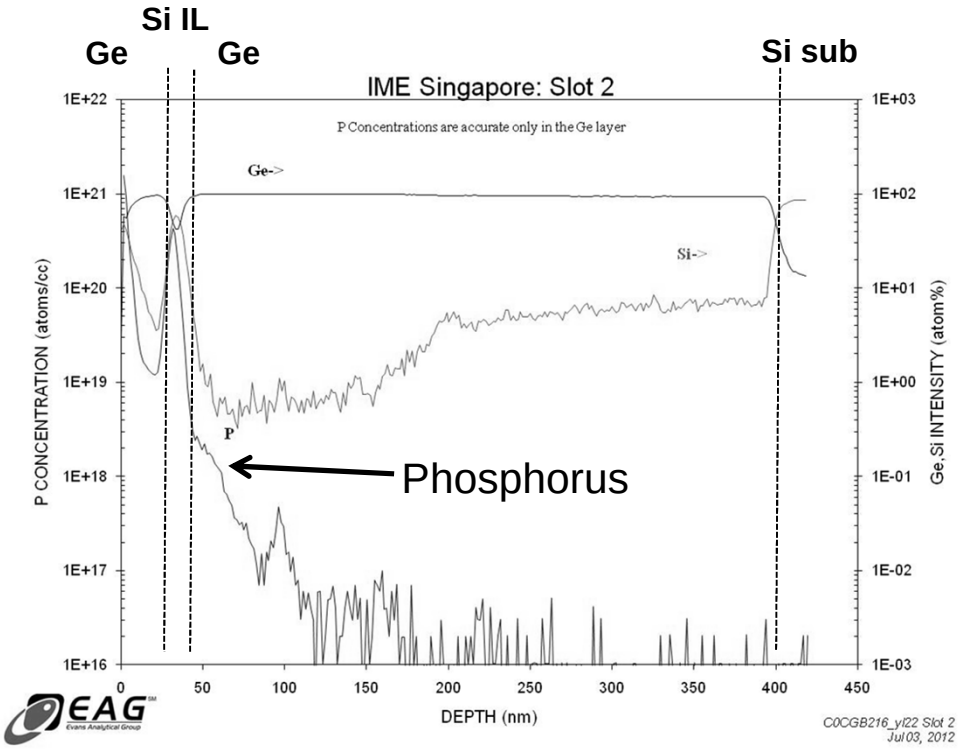

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Ge
Si sub
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1E+02
1E+01
1E+00
1E-01
1E-02
1E-03
0
50
100
150
200
250
300
350
400
450
EAG
Evans Analytical Group
C0CGB216_yl22 Slot 2
Jul 03, 2012

Figure 7A

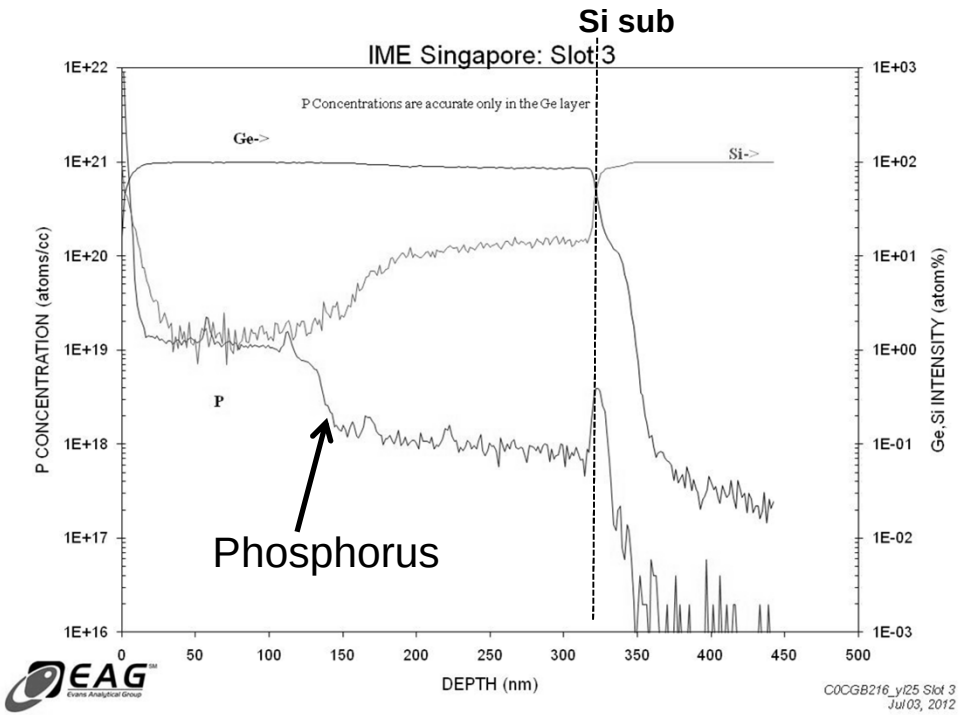

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Si->
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Phosphorus
P CONCENTRATION (atoms/cc)
Ge,Si INTENSITY (atom%)
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1E+18
1E+17
1E+16
1E+03
1E+02
1E+01
1E+00
1E-01
1E-02
1E-03
0
50
100
150
200
250
300
350
400
450
500
EAG
Evans Analytical Group
C0CGB216_yl25 Slot 3
Jul 03, 2012

Figure 7B

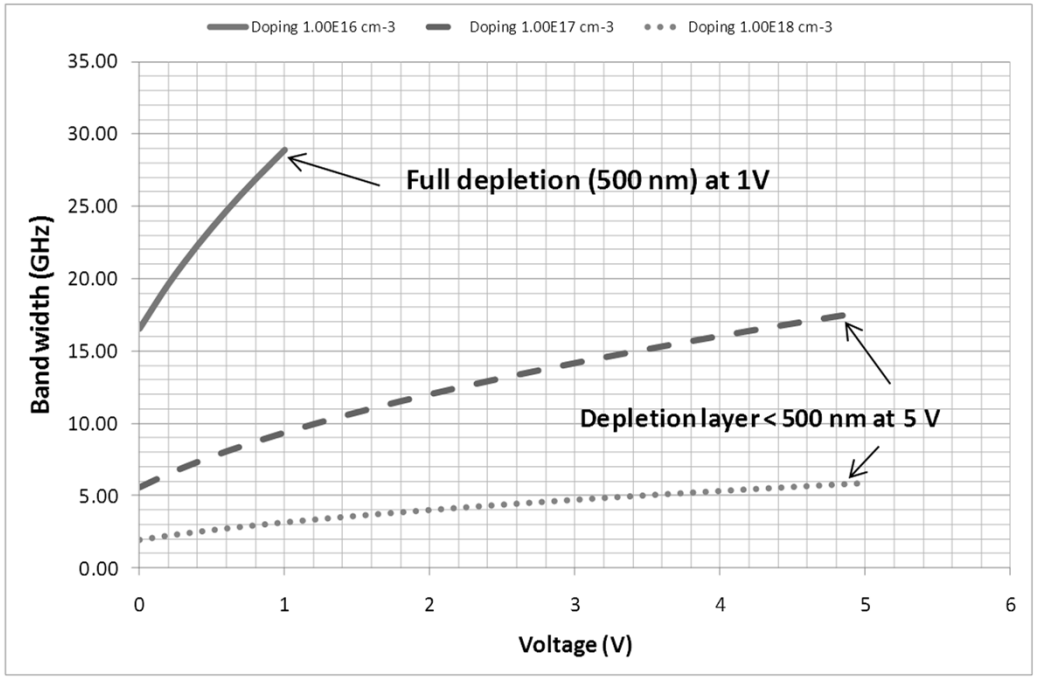

Doping 1.00E16 cm-3
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35.00
30.00
25.00
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15.00
10.00
5.00
0.00
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0
1
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3
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Voltage (V)
Full depletion (500 nm) at 1V
Depletion layer < 500 nm at 5 V

Figure 8