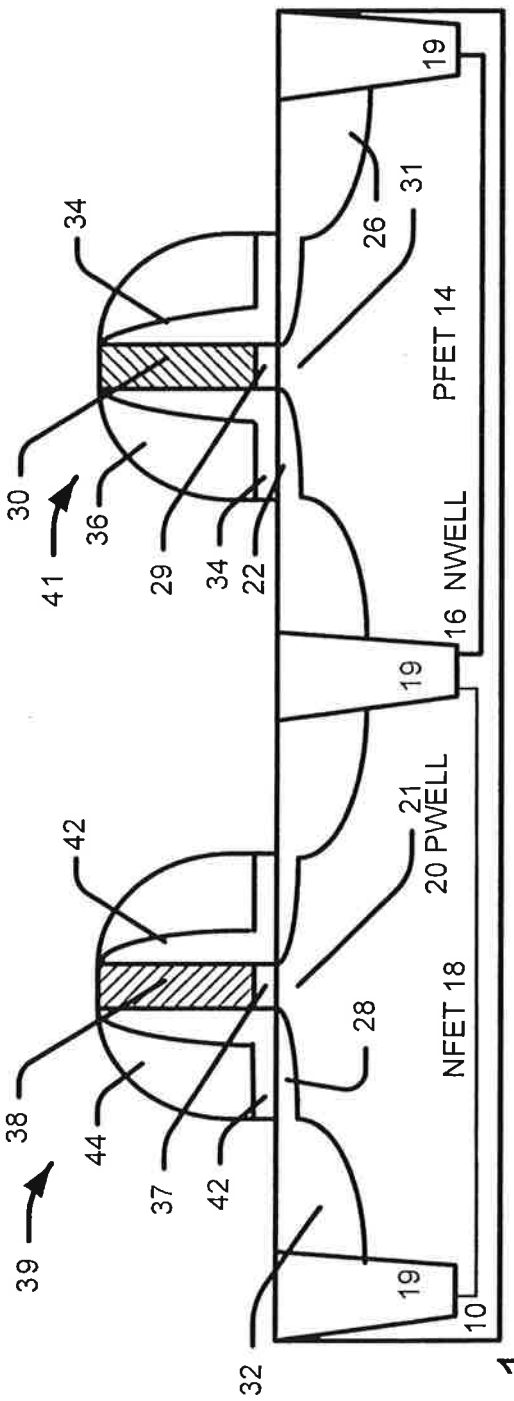

10
16 NWELL
20 PWELL
NFET 18
PFET 14
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44

FIG. 1

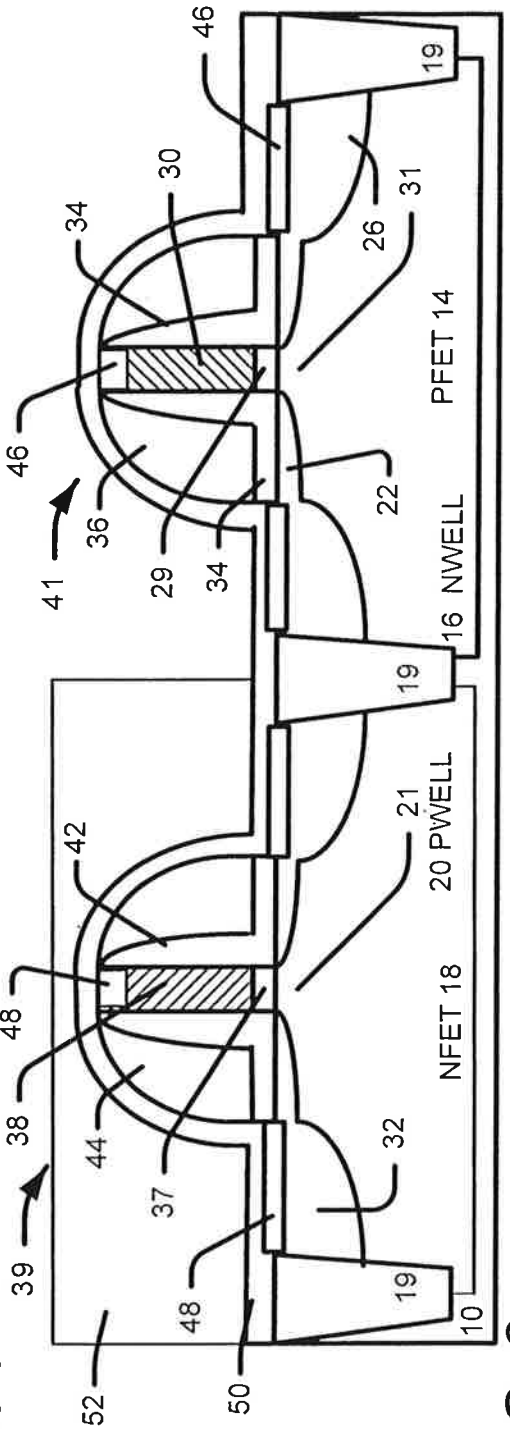

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20 PWELL
NFET 18
PFET 14
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FIG. 2

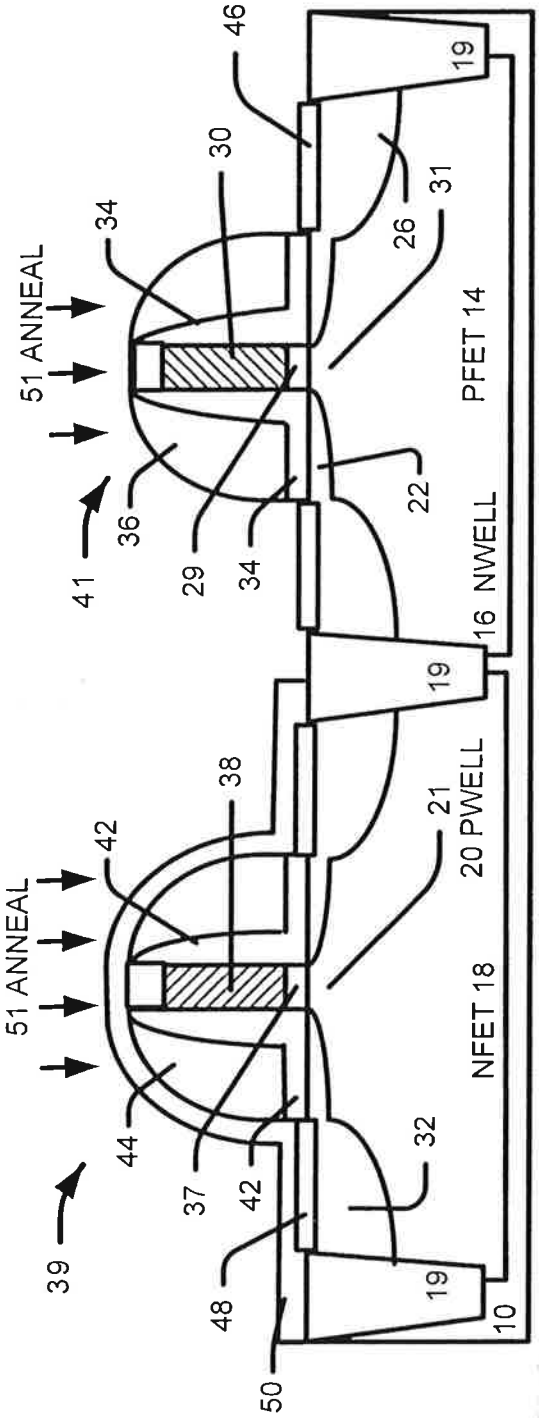

51 ANNEAL
51 ANNEAL
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10
21
20 PWELL
16 NWELL
NFET 18
PFET 14

FIG. 3

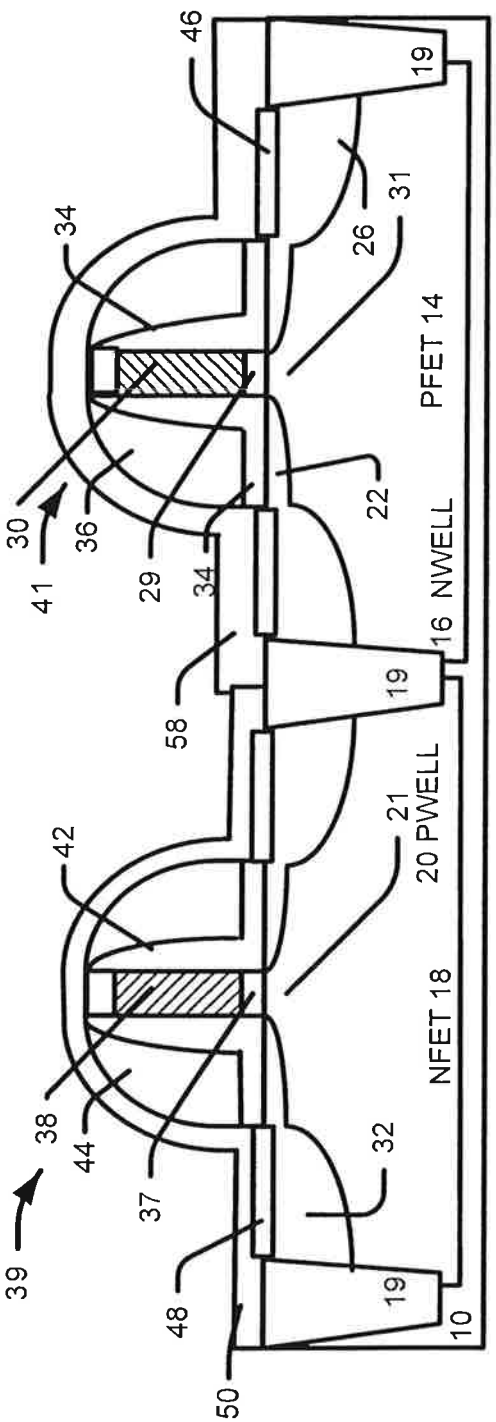

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20 PWELL
16 NWELL
NFET 18
PFET 14
48
50

FIG. 4

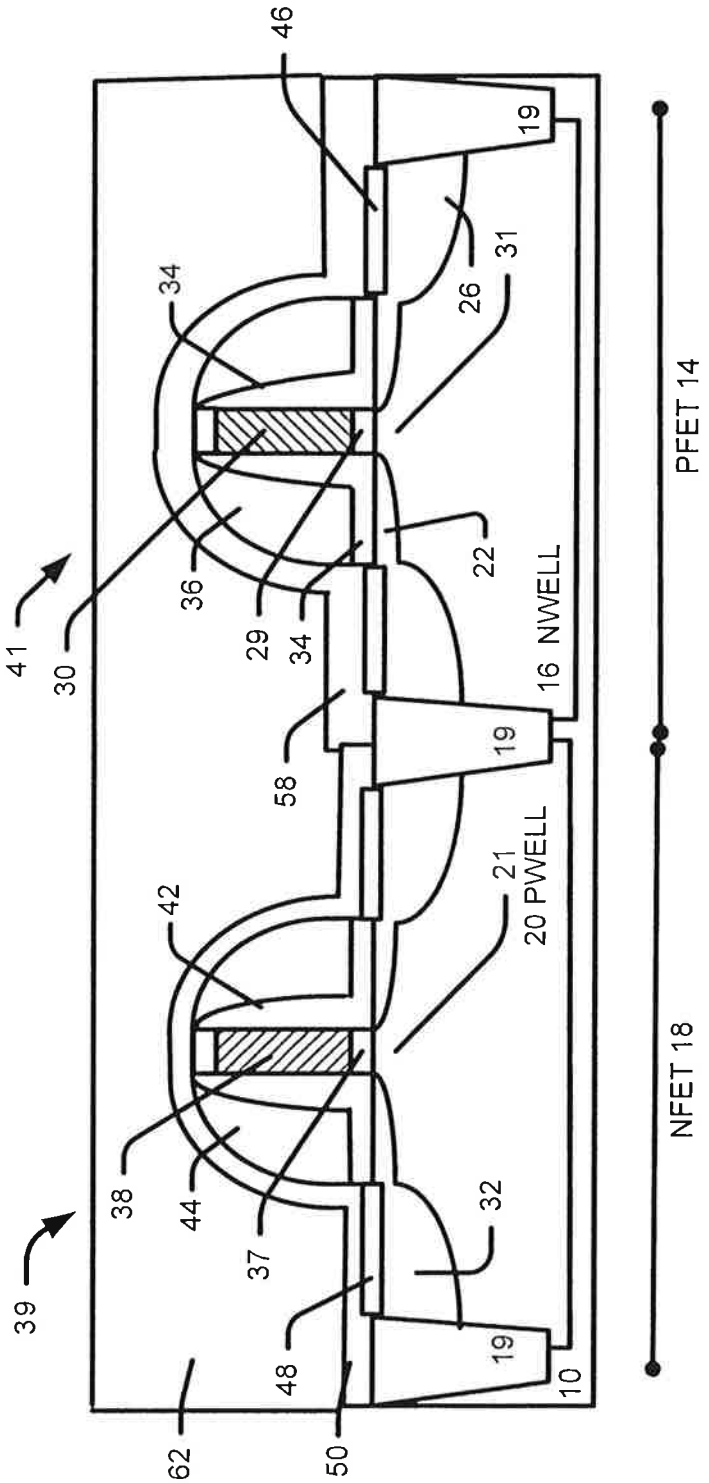

46
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16 NWELL
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20 PWELL
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PFET 14
NFET 18

FIG. 5

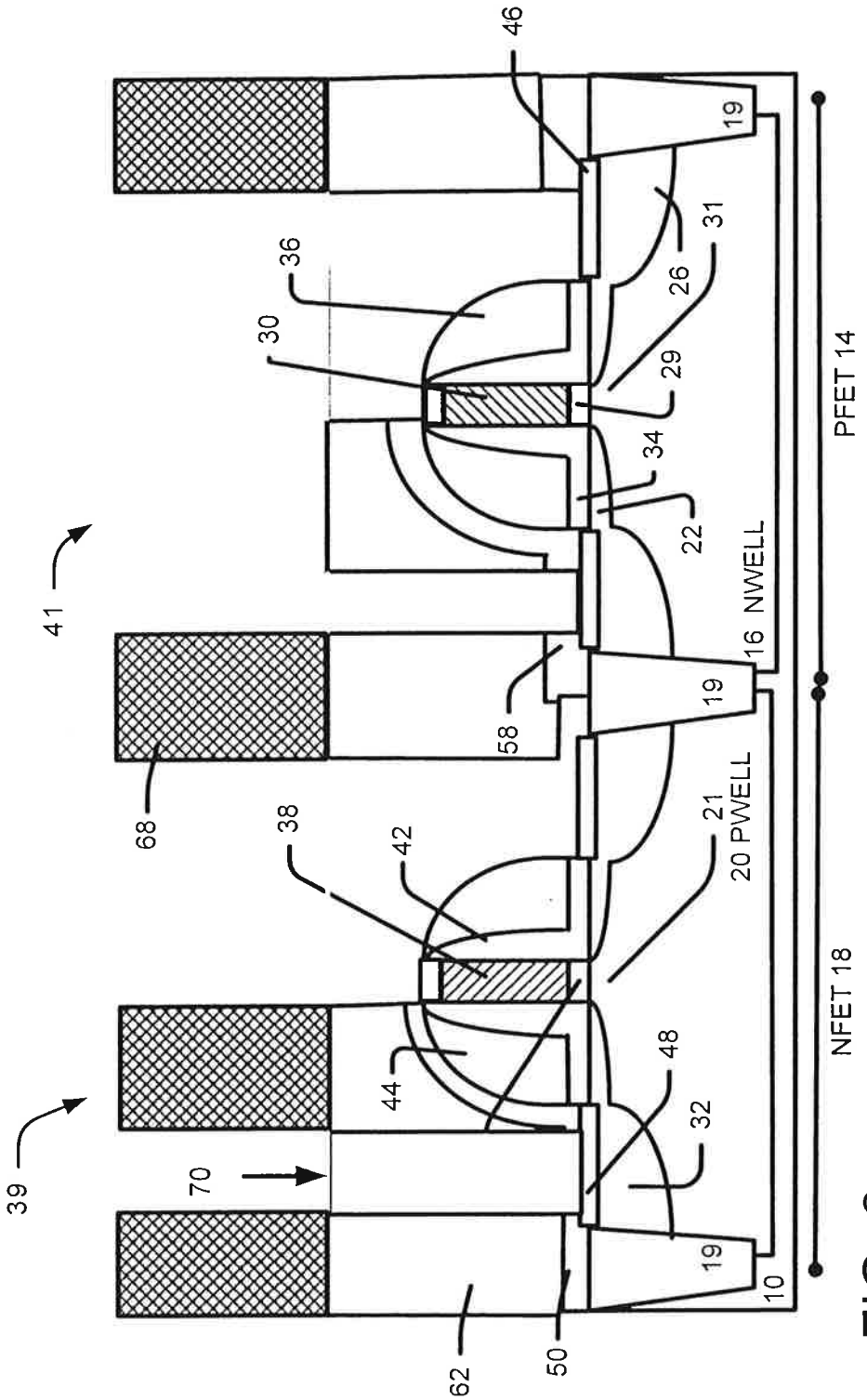

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16 NWELL
PFET 14
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20 PWELL
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NFET 18
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FIG. 6

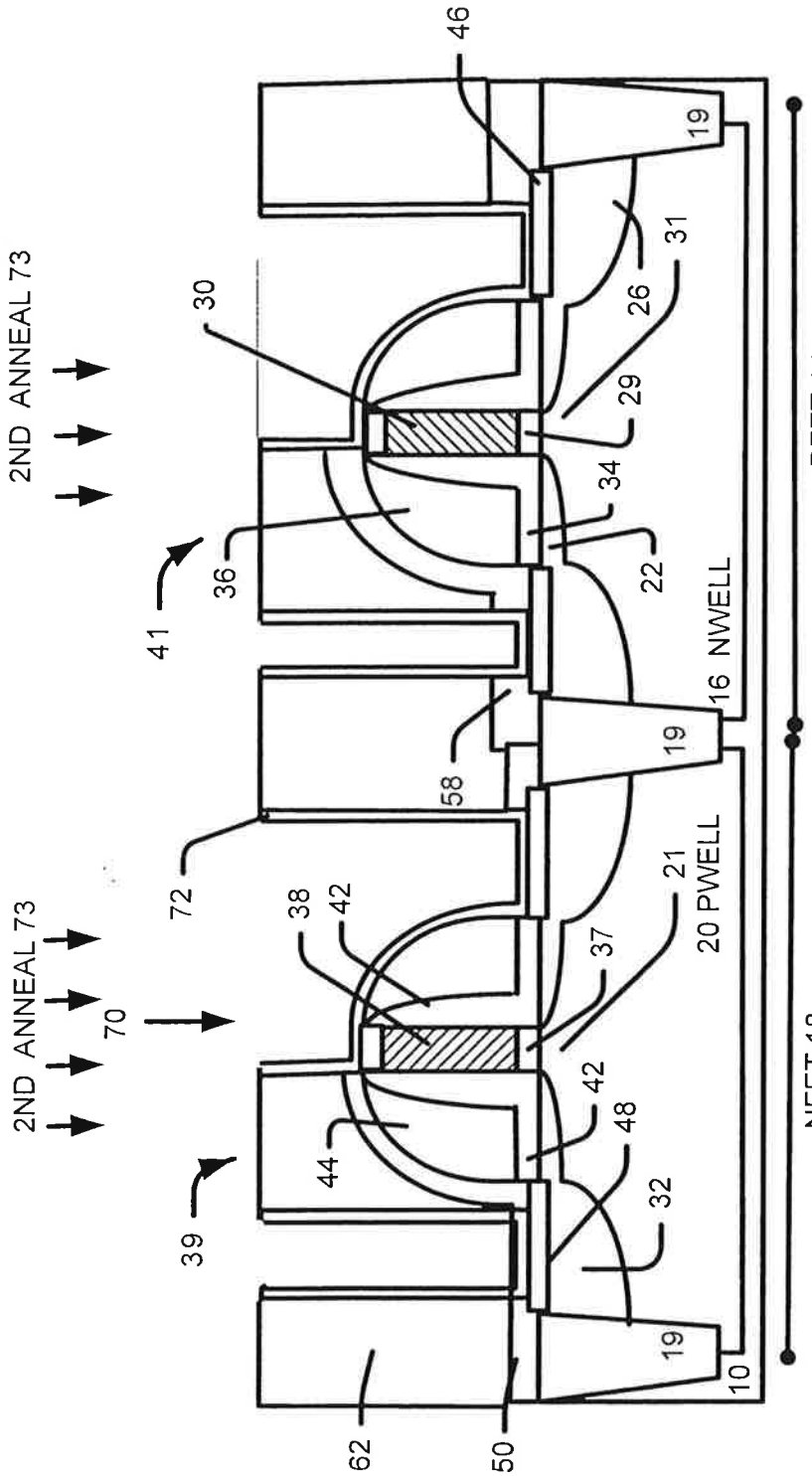

2ND ANNEAL 73
2ND ANNEAL 73
2ND ANNEAL 73
70
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16 NWELL
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20 PWELL
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PFET 14
NFET 18

FIG. 7

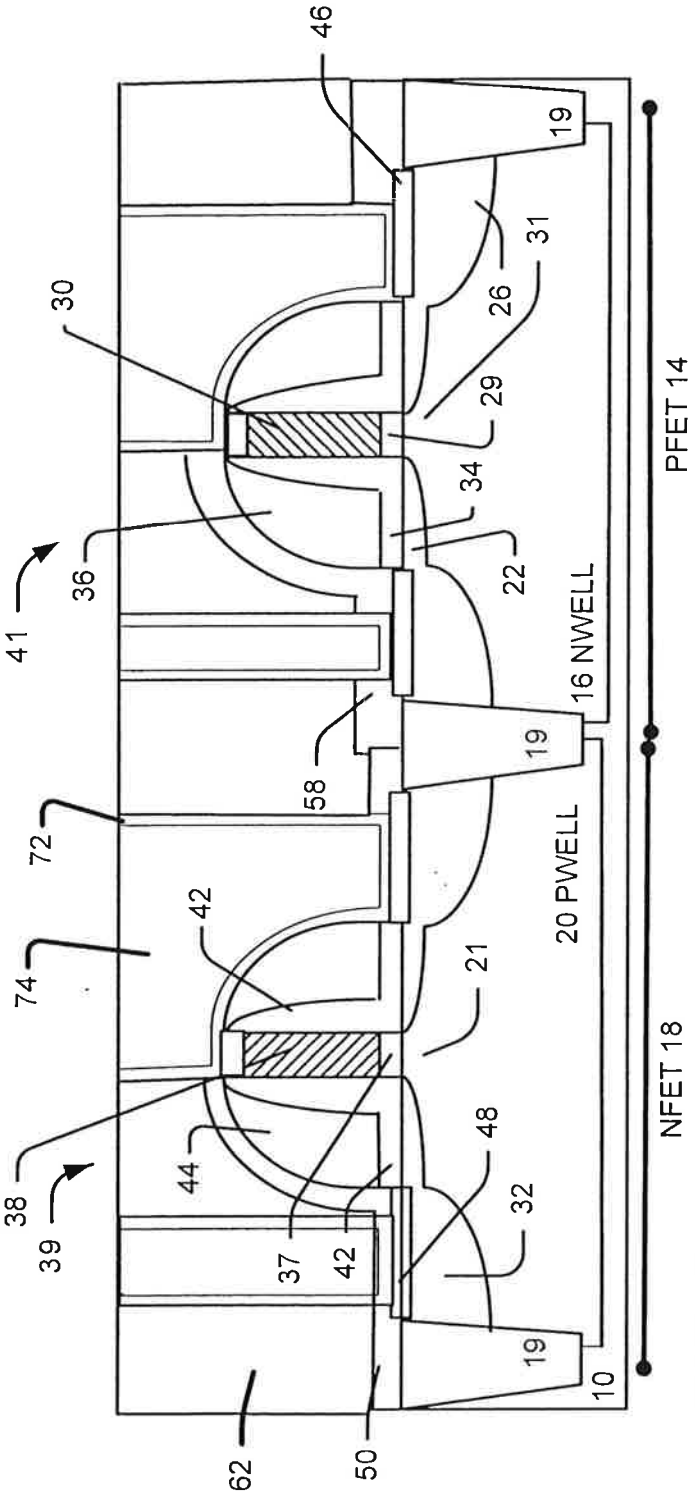
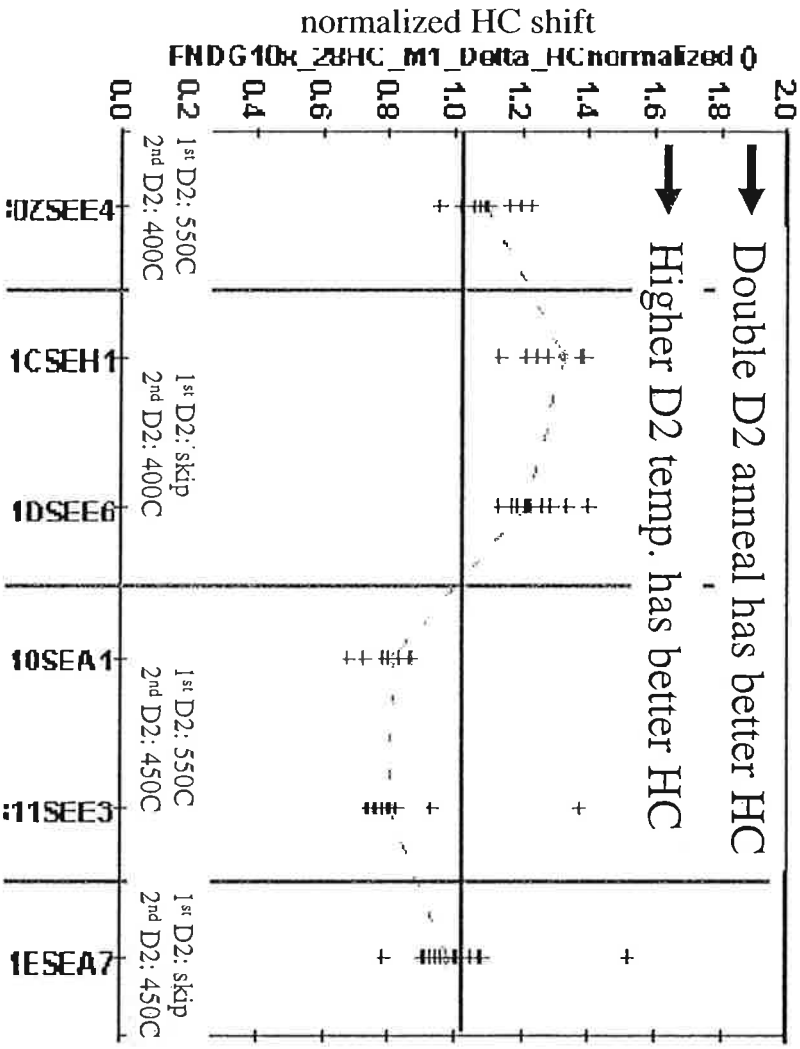

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16 NWELL
PFET 14
58
19
72
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74
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20 PWELL
48
38
44
32
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37
42
NFET 18
19
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62
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FIG. 8

FIGURE 9


normalized HC shift
FNDG10x_28HC_M1_Delta_HCnormalized()
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Double D2 anneal has better HC
Higher D2 temp. has better HC
1DZSEE4
1st D2: 550C
2nd D2: 400C
1CSEH1
1st D2: skip
2nd D2: 400C
1DSEE6
1OSEA1
1st D2: 550C
2nd D2: 450C
1I1SEE3
1ESEA7
1st D2: skip
2nd D2: 450C

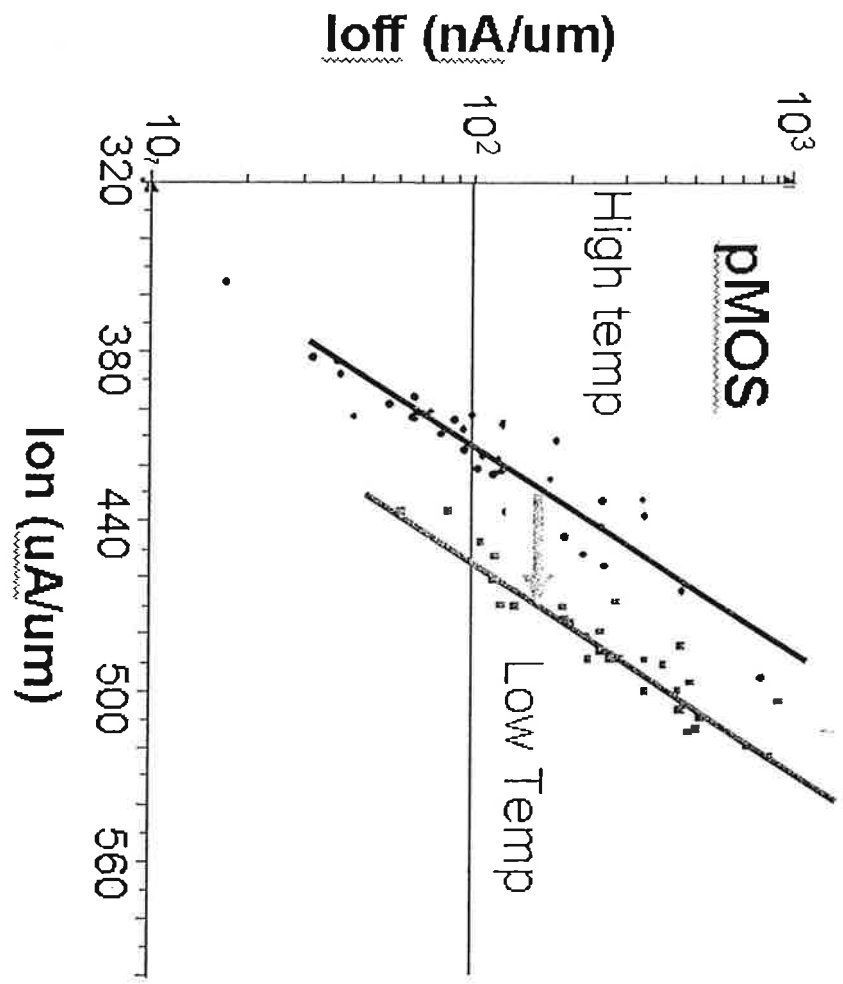

Ioff (nA/um)
10³
10²
10¹
320
380
440
500
560
Ion (uA/um)
pMOS
High temp
Low Temp

FIGURE 10