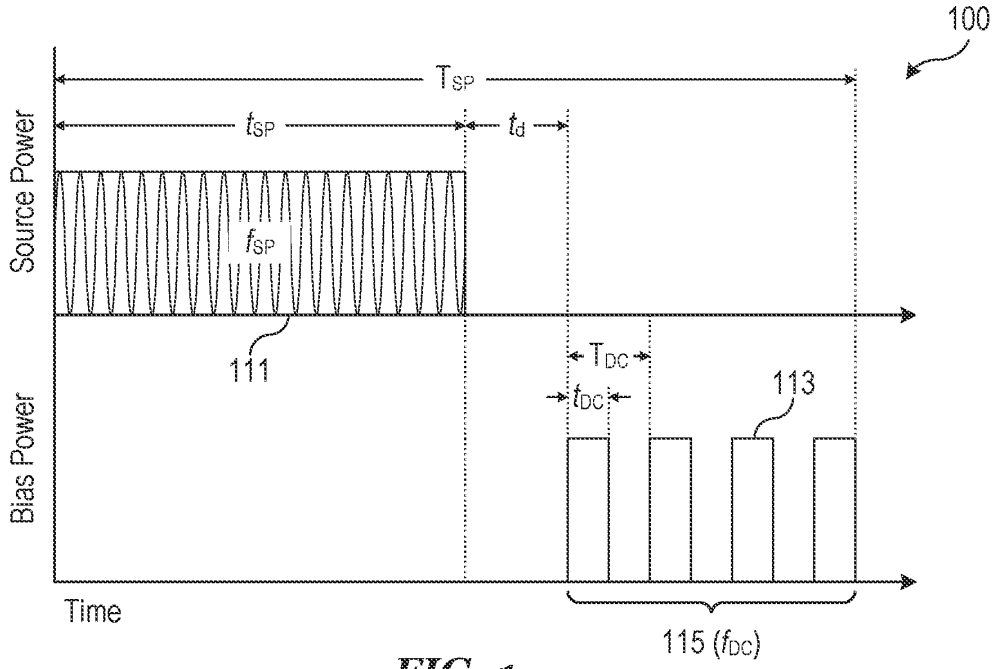

100
T_{SP}
t_{SP}
t_d
Source Power
f_{SP}
111
T_{DC}
t_{DC}
113
Bias Power
Time
115 (f_{DC})

FIG. 1

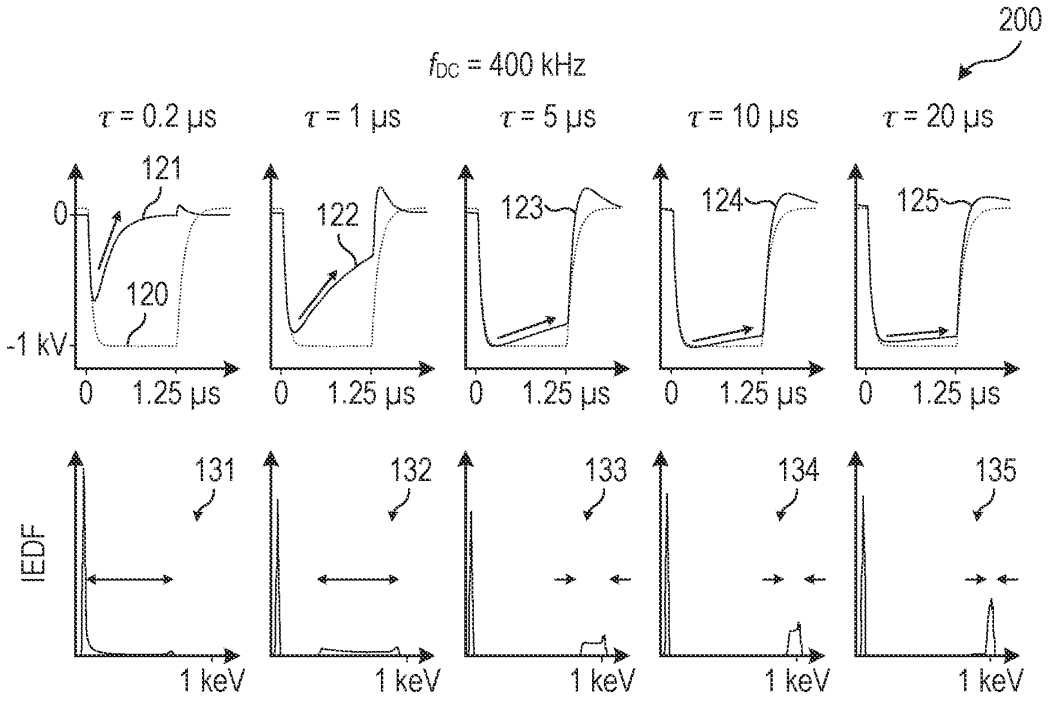

200
f_{DC} = 400 kHz
τ = 0.2 µs
τ = 1 µs
τ = 5 µs
τ = 10 µs
τ = 20 µs
121
122
123
124
125
0
-1 kV
120
0 1.25 µs
IEDF
131
132
133
134
135
1 keV

FIG. 2

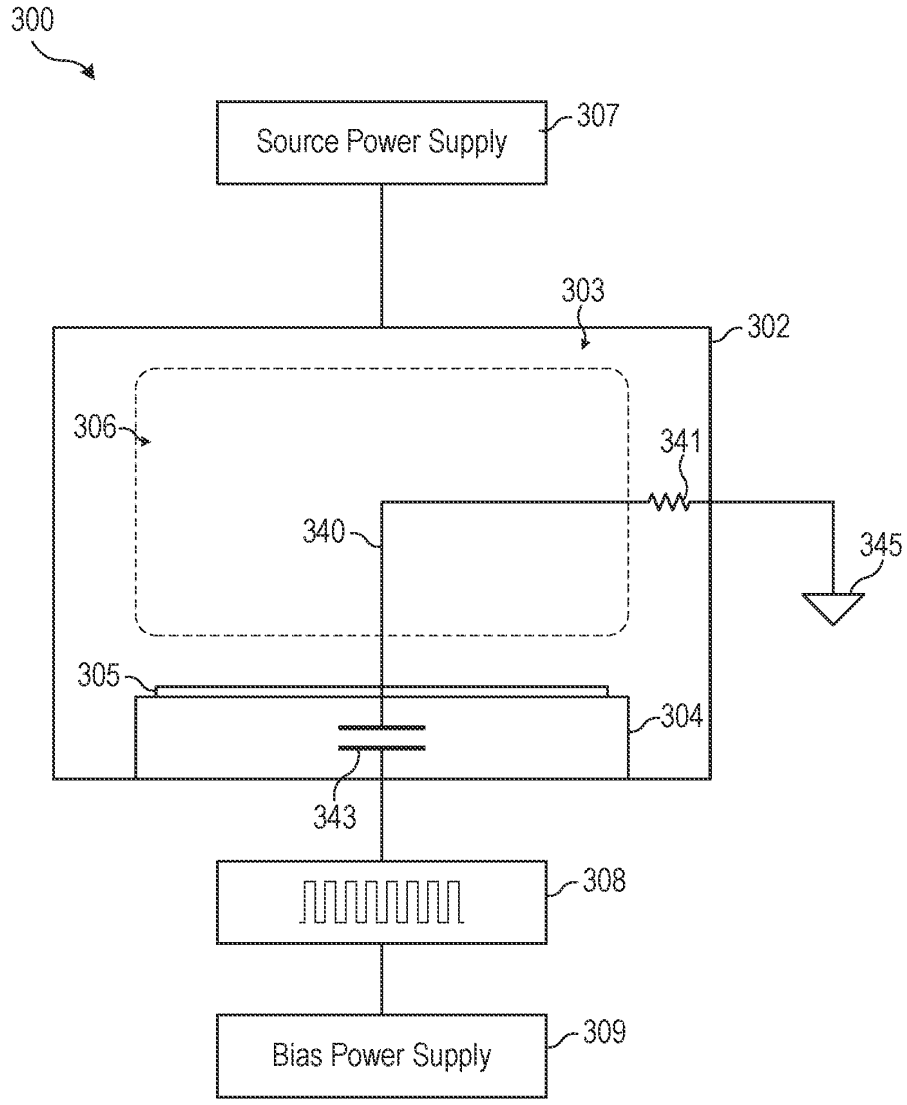

300
Source Power Supply
307
303
302
306
341
340
345
305
304
343
308
Bias Power Supply
309

FIG. 3

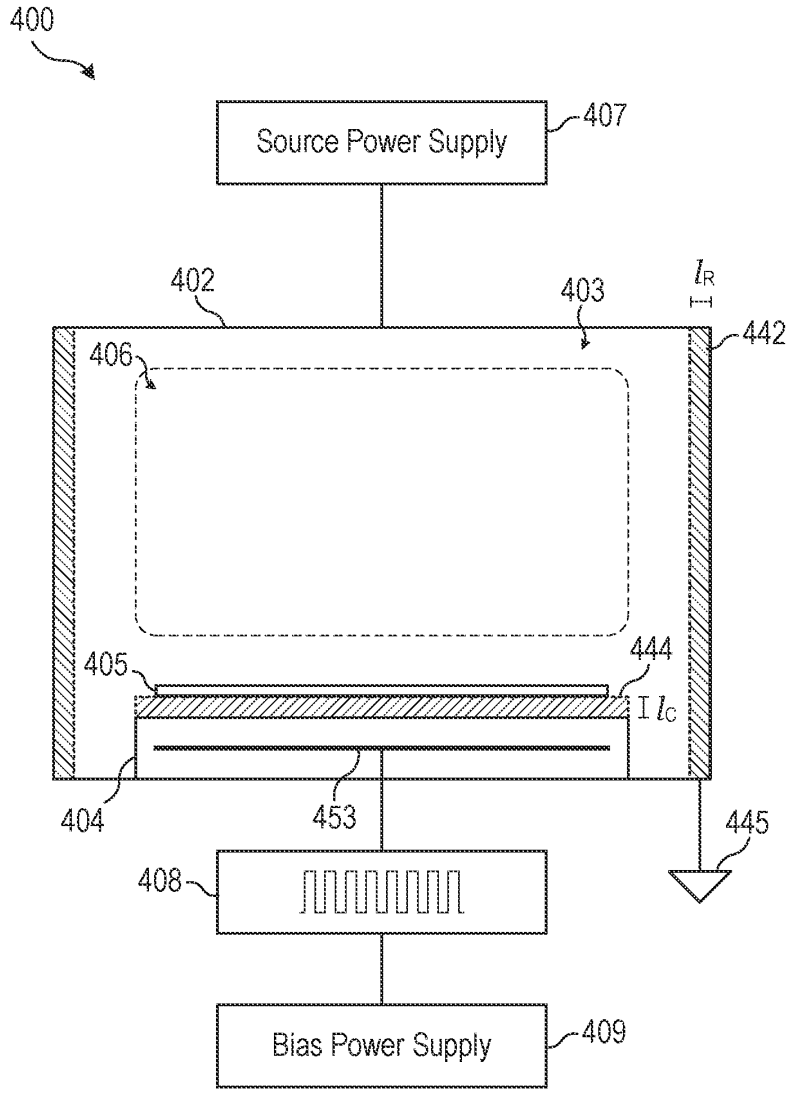

400
Source Power Supply
407
402
403
l_R
442
406
405
444
I l_C
404
453
445
408
Bias Power Supply
409

FIG. 4

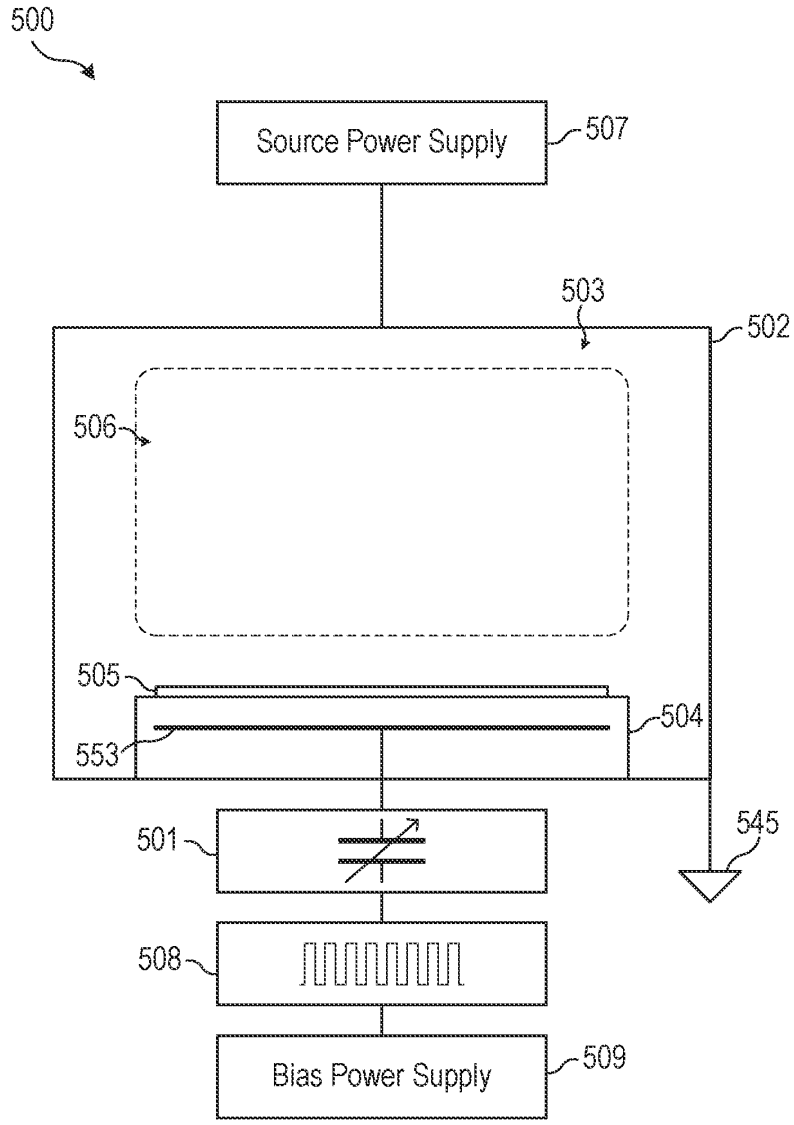

500
Source Power Supply
507
503
502
506
505
504
553
501
545
508
Bias Power Supply
509

FIG. 5

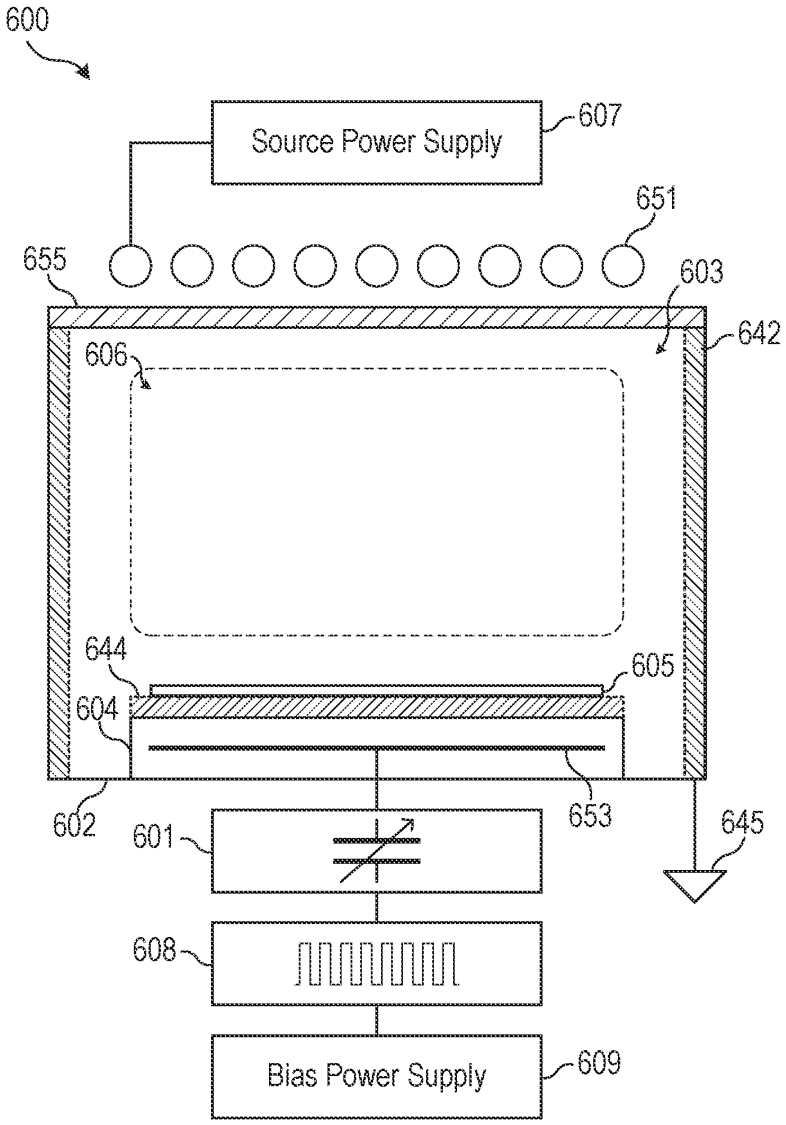

600
Source Power Supply
607
651
655
603
642
606
644
605
604
602
601
653
645
608
Bias Power Supply
609

FIG. 6

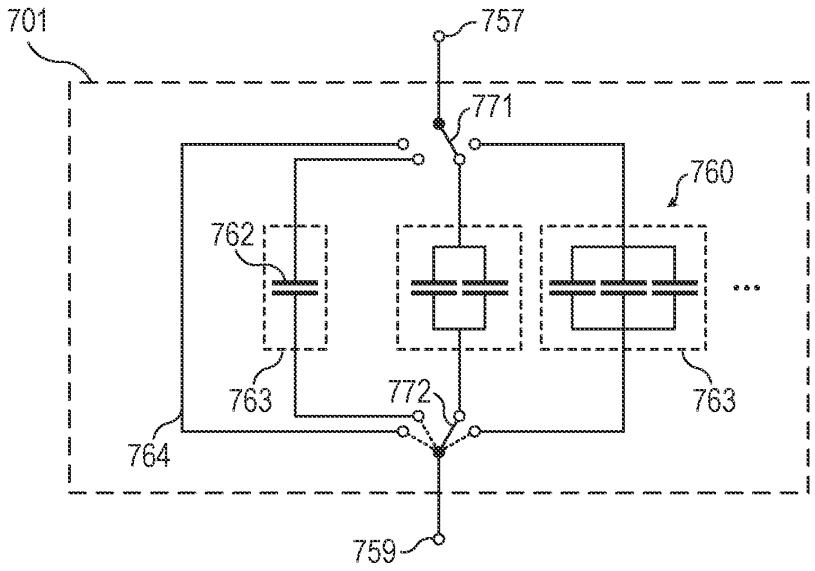

701
757
771
760
762
763
772
763
764
759

FIG. 7

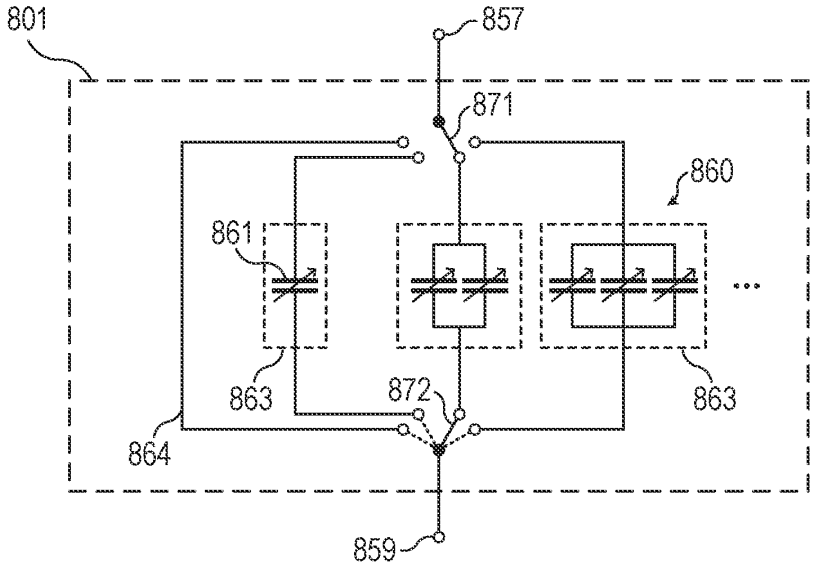

801
857
871
860
861
863
872
863
864
859

FIG. 8

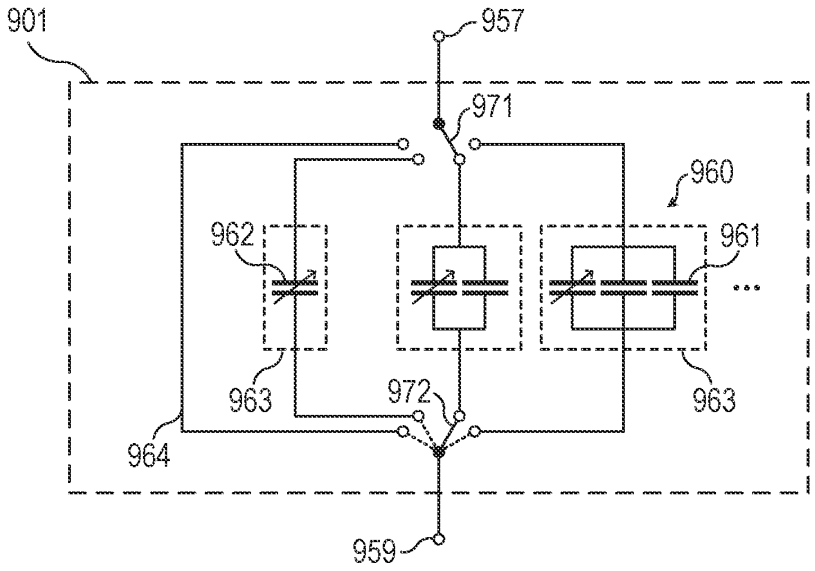

901
957
971
960
962
961
963
972
963
964
959

FIG. 9

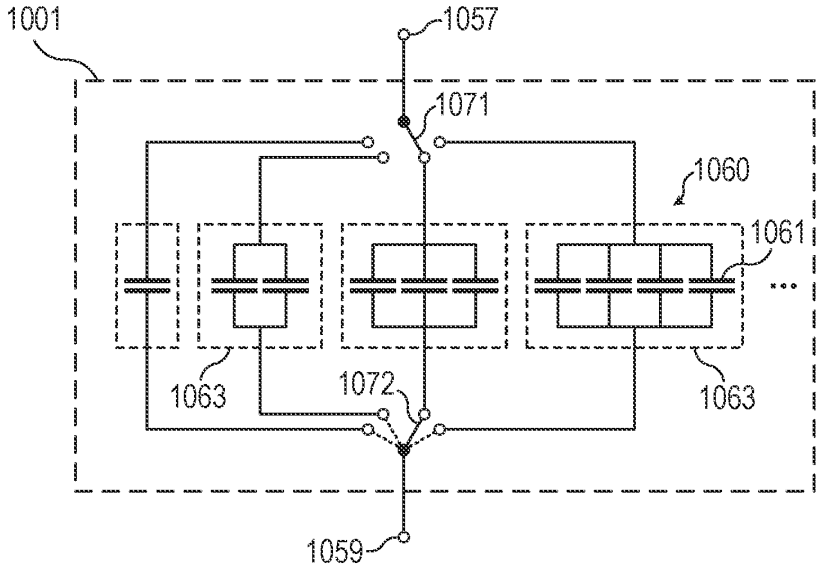

1001
1057
1071
1060
1061
1063
1072
1063
1059

FIG. 10

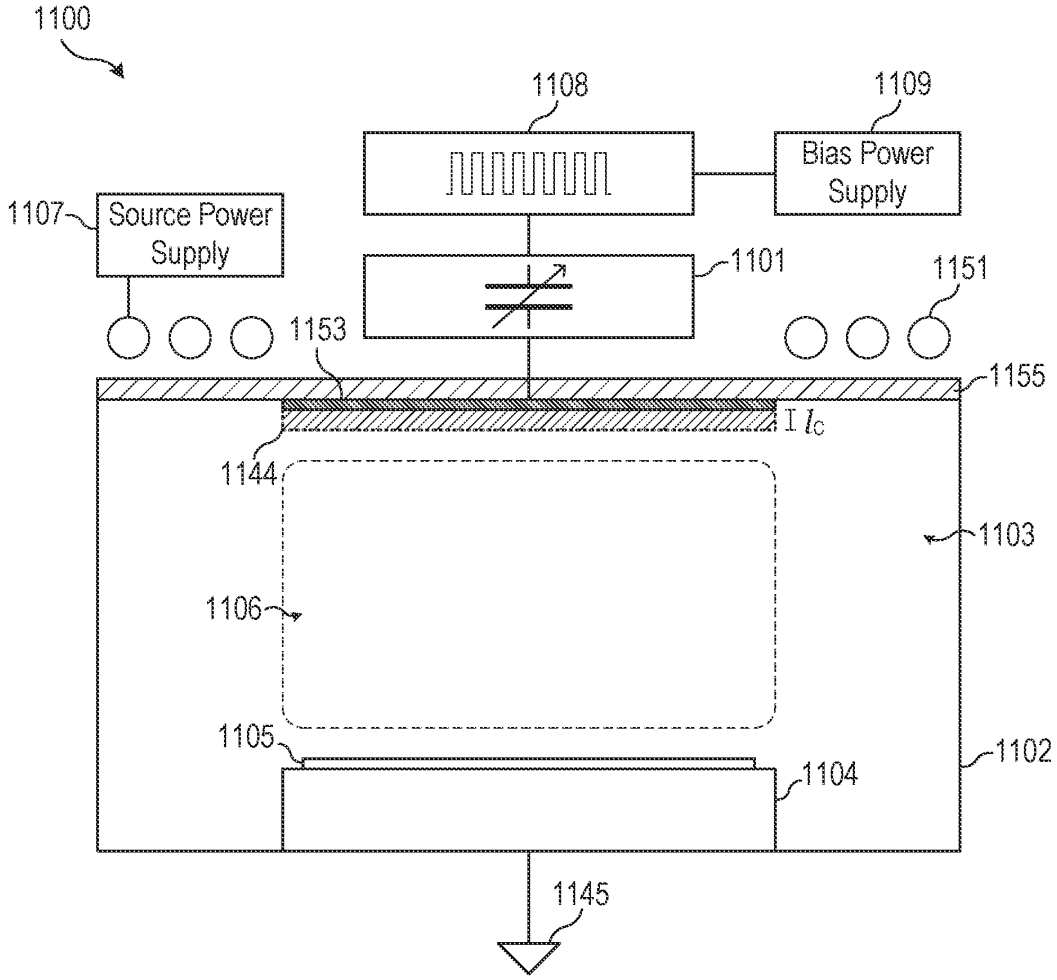

1100
1108
1109
Bias Power Supply
1107
Source Power Supply
1101
1151
1153
1155
I l_c
1144
1103
1106
1105
1104
1102
1145

FIG. 11

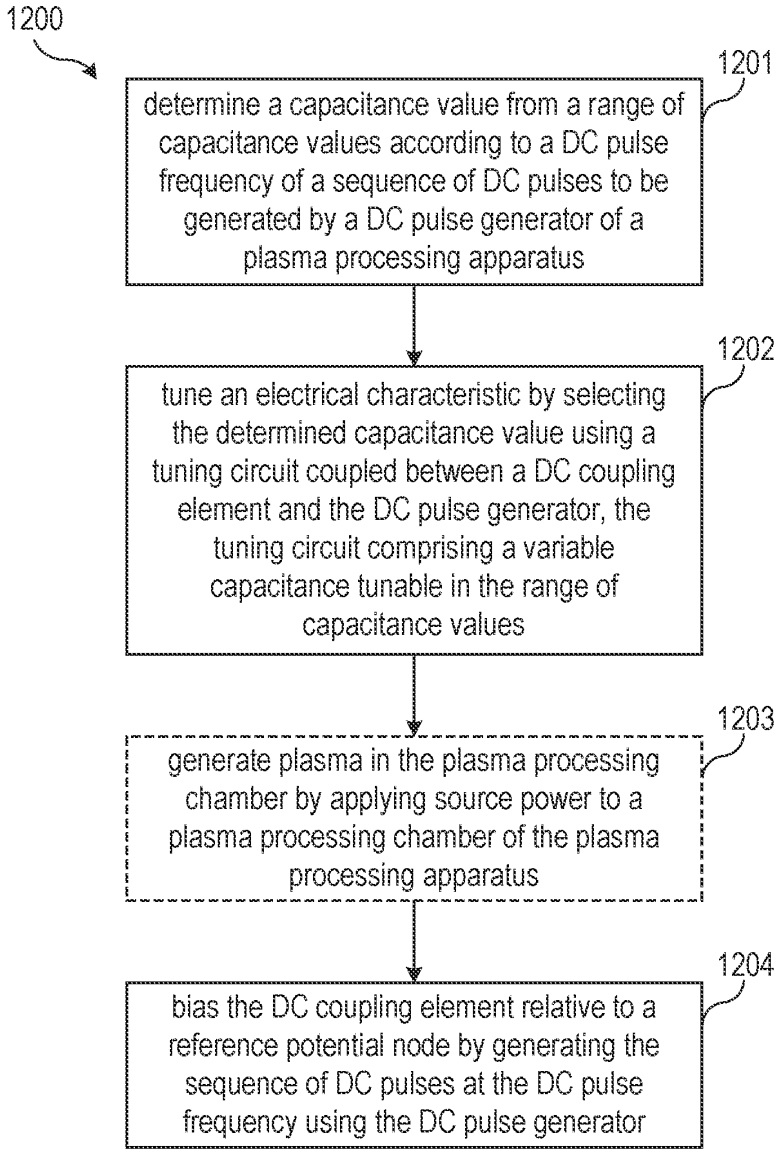

1200
1201
determine a capacitance value from a range of capacitance values according to a DC pulse frequency of a sequence of DC pulses to be generated by a DC pulse generator of a plasma processing apparatus
1202
tune an electrical characteristic by selecting the determined capacitance value using a tuning circuit coupled between a DC coupling element and the DC pulse generator, the tuning circuit comprising a variable capacitance tunable in the range of capacitance values
1203
generate plasma in the plasma processing chamber by applying source power to a plasma processing chamber of the plasma processing apparatus
1204
bias the DC coupling element relative to a reference potential node by generating the sequence of DC pulses at the DC pulse frequency using the DC pulse generator

FIG. 12