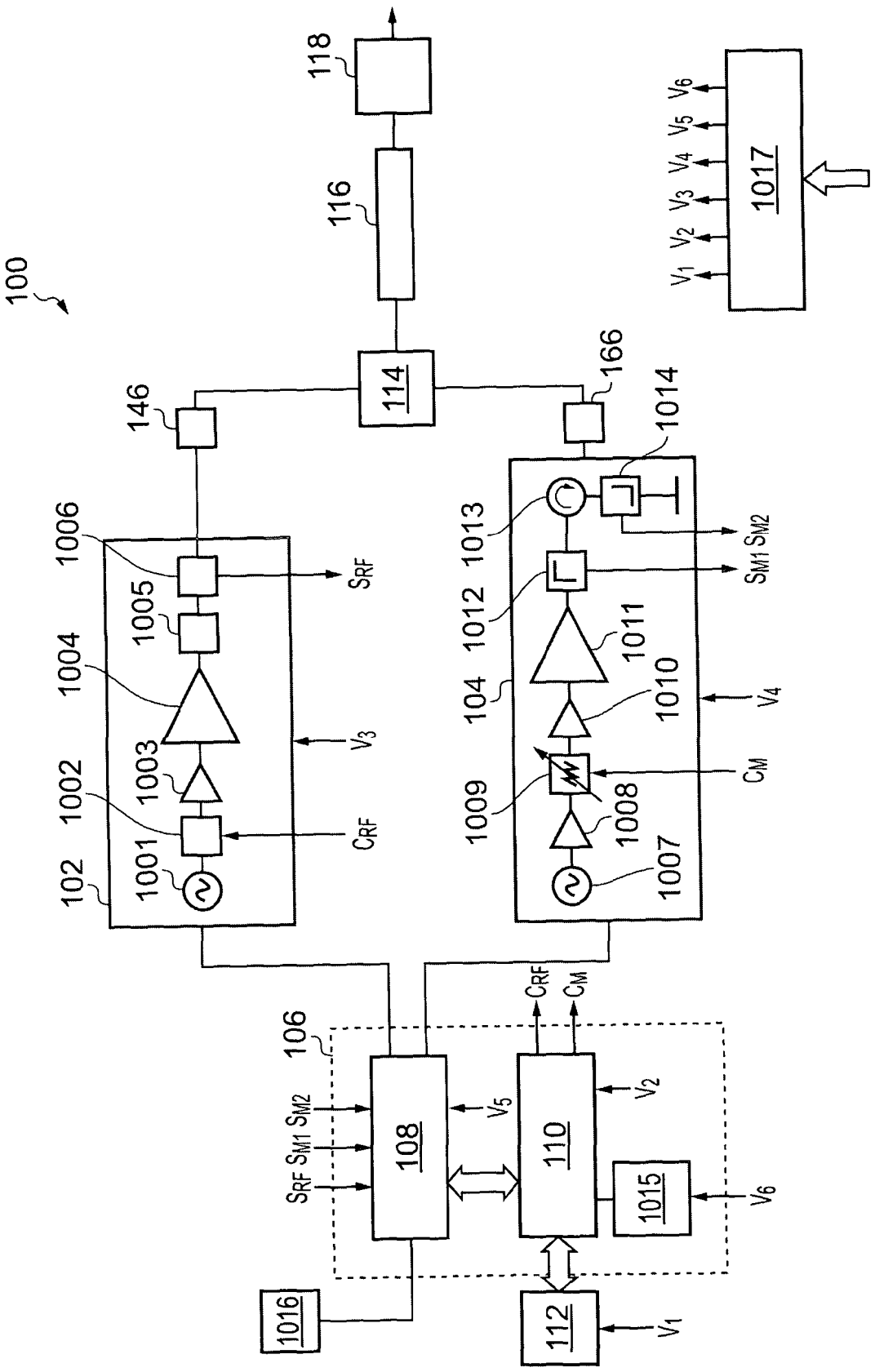

100
118
116
114
146
166
1014
1017
V1 V2 V3 V4 V5 V6
1006
1005
1004
1003
1002
1001
102
SRF
V3
CRF
1013
1012
1011
1010
104
1009
1008
1007
SM1 SM2
V4
CM
106
108
110
112
1015
1016
SRF SM1 SM2
V5
V2
V6
V1
CRF
CM

FIG. 1

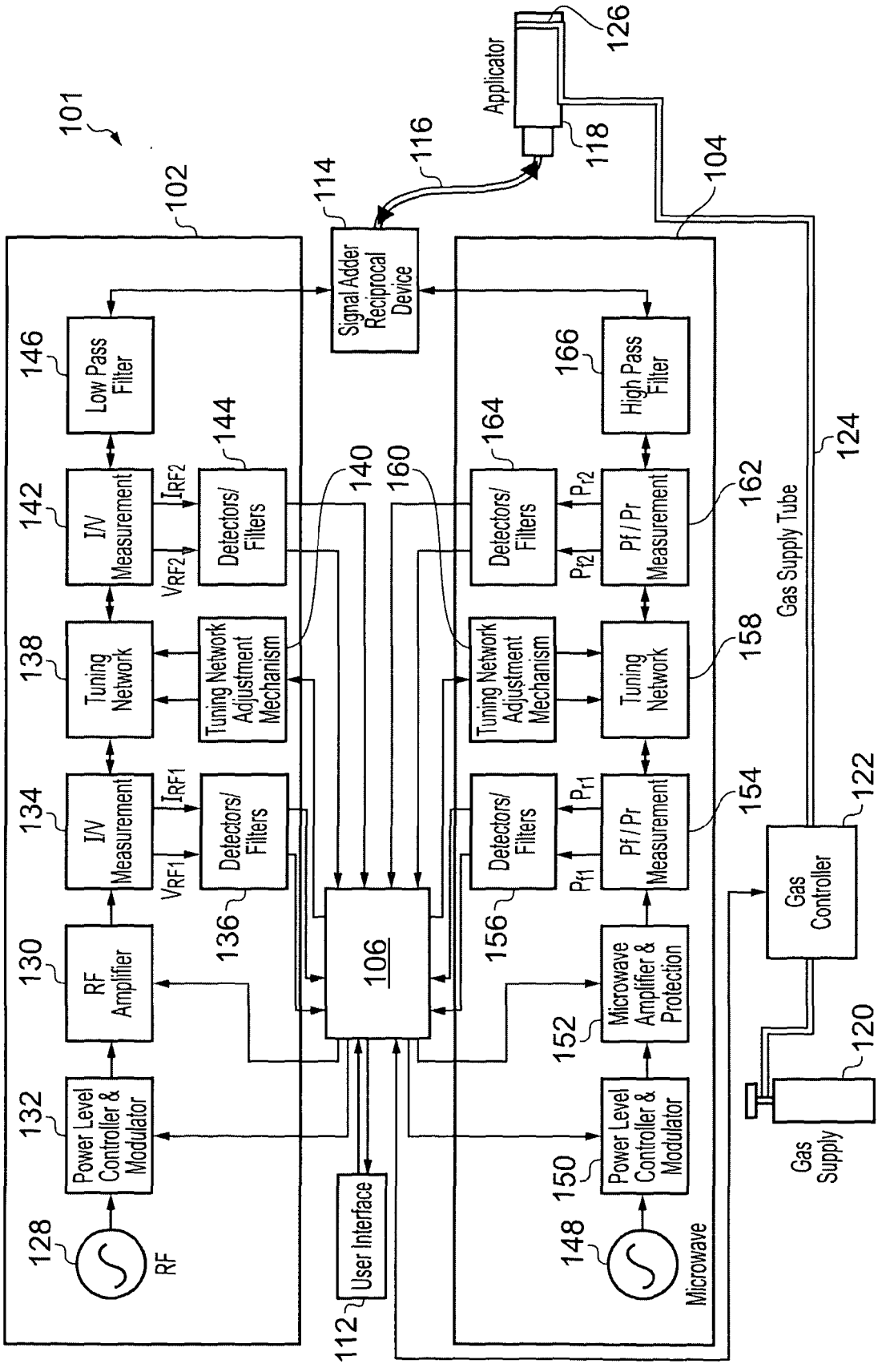

101
102
104
106
112
114
116
118
120
122
124
126
128
130
132
134
136
138
140
142
144
146
148
150
152
154
156
158
160
162
164
166
Applicator
Signal Adder Reciprocal Device
Low Pass Filter
High Pass Filter
I/V Measurement
Detectors/ Filters
Tuning Network
Tuning Network Adjustment Mechanism
Pf / Pr Measurement
RF Amplifier
Microwave Amplifier & Protection
Power Level Controller & Modulator
Gas Controller
Gas Supply Tube
Gas Supply
User Interface
RF
Microwave
VRF1
IRF1
VRF2
IRF2
Pf1
Pr1
Pf2
Pr2

FIG. 2

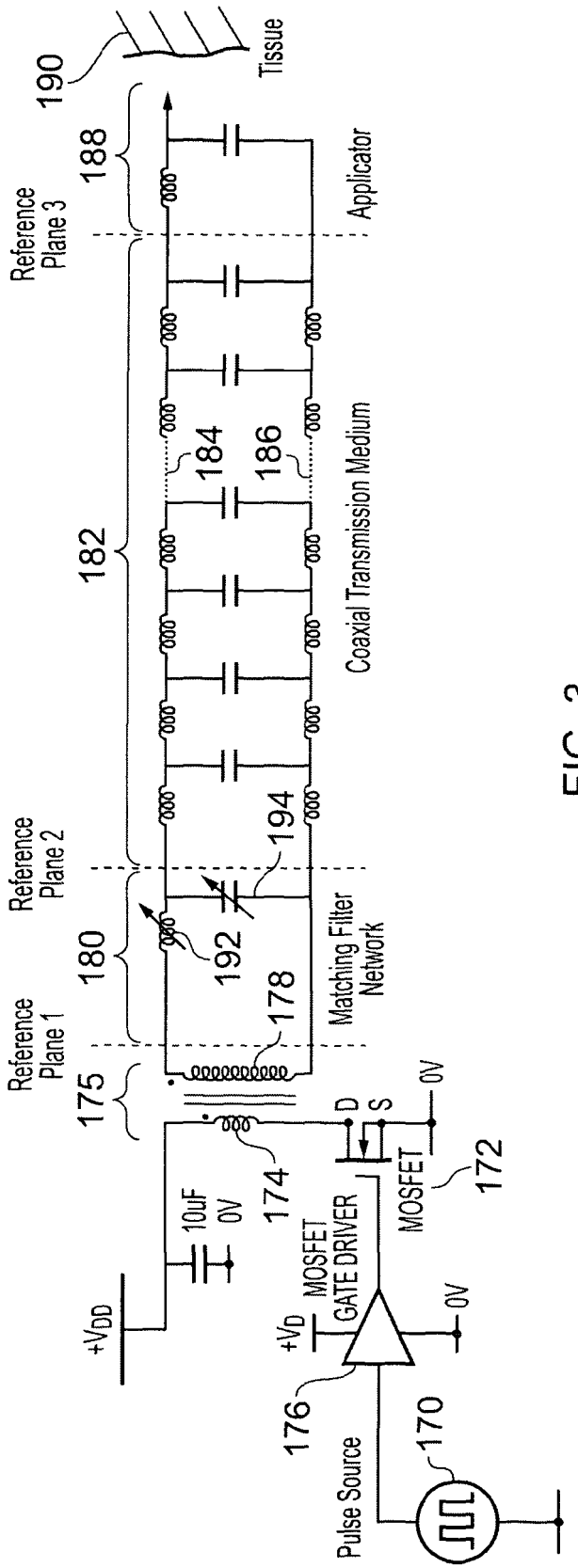

190
Tissue
188
Reference Plane 3
Applicator
182
184
186
Coaxial Transmission Medium
194
Reference Plane 2
180
192
178
Matching Filter Network
Reference Plane 1
175
D
S
0V
174
172
10uF
0V
MOSFET
MOSFET GATE DRIVER
+VDD
+VD
0V
176
170
Pulse Source

FIG. 3

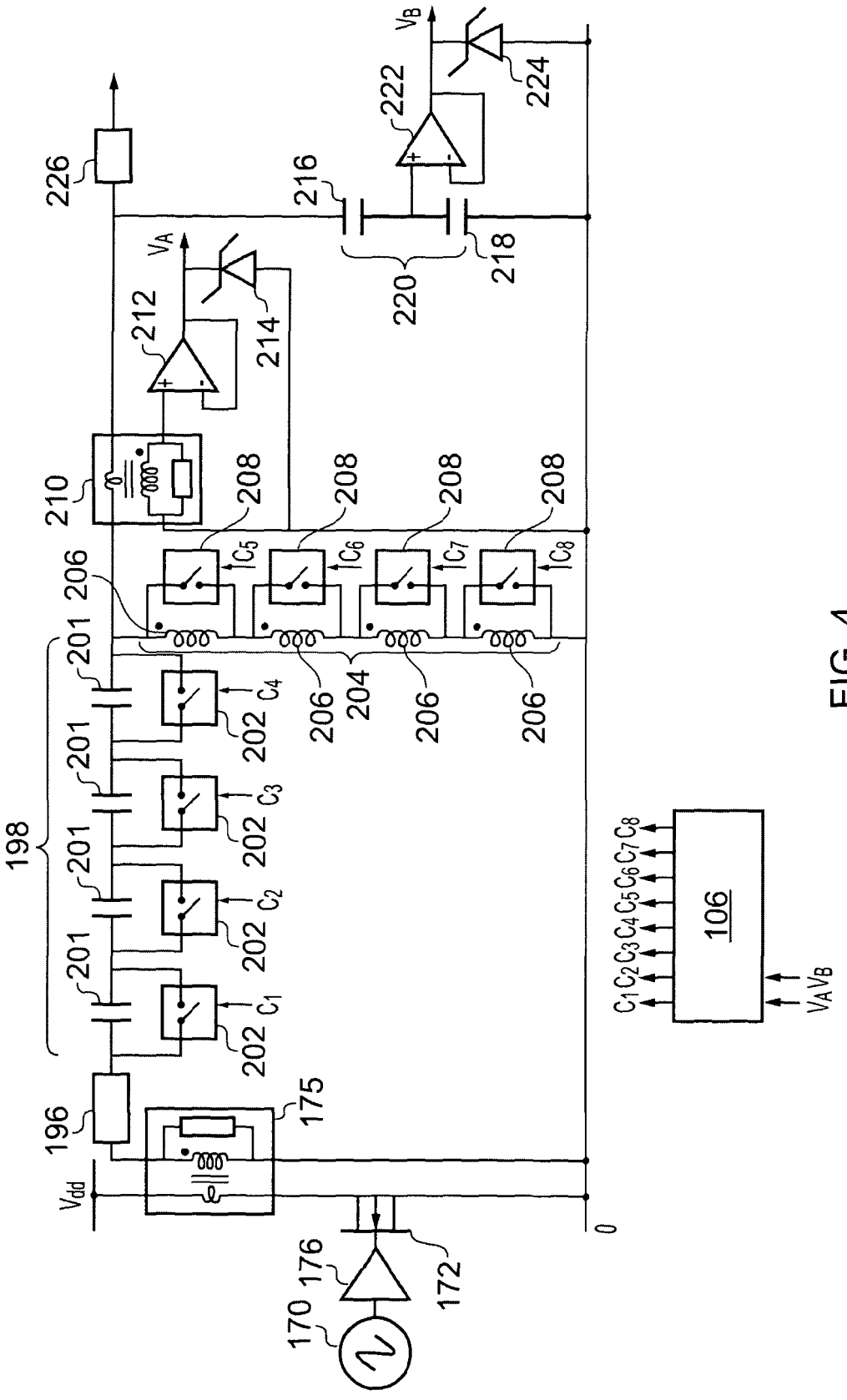

226
216
222
224
$V_B$
$V_A$
212
214
220
218
210
208
$C_5$
$C_6$
$C_7$
$C_8$
206
201
204
$C_4$
$C_3$
$C_2$
$C_1$
202
198
196
175
$V_{dd}$
0
170
176
172
106
$C_1$ $C_2$ $C_3$ $C_4$ $C_5$ $C_6$ $C_7$ $C_8$
$V_A$ $V_B$

FIG. 4

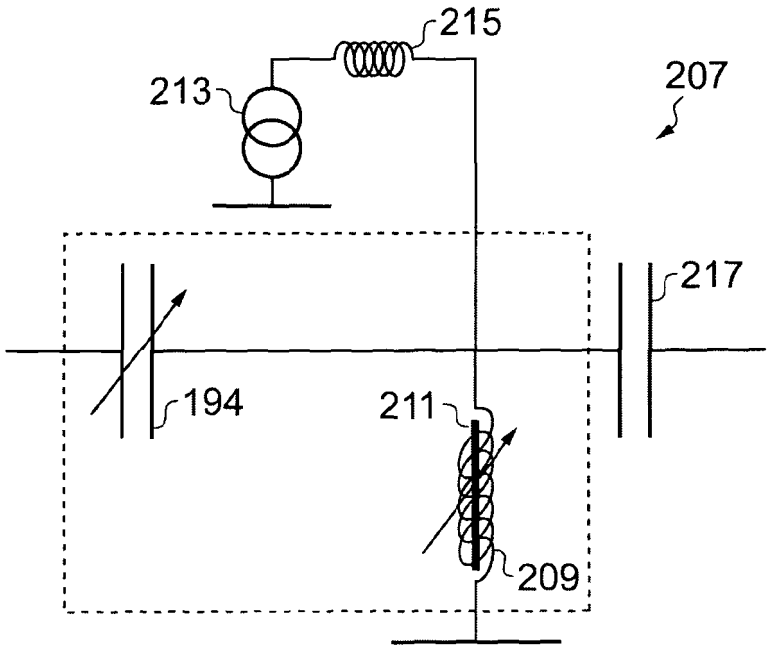



FIG. 5

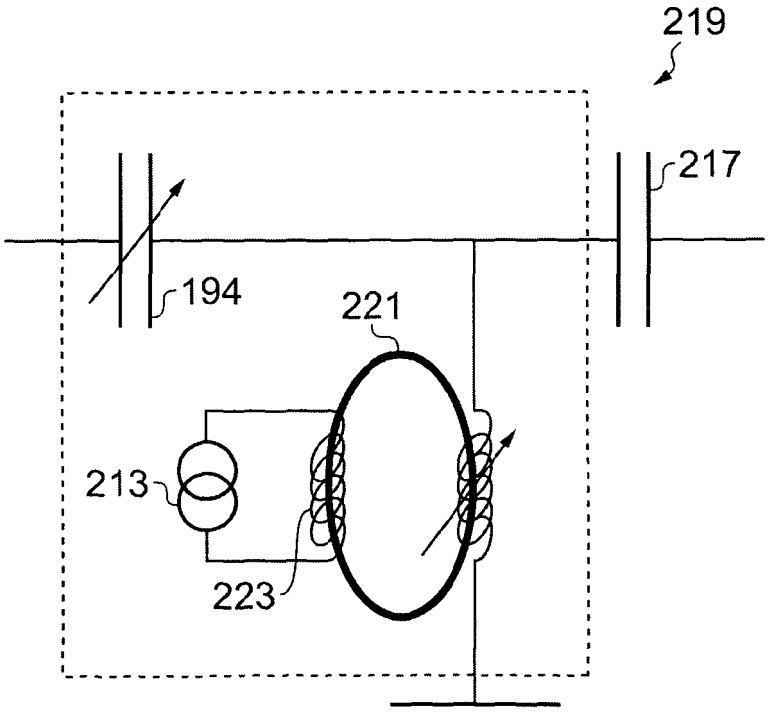



FIG. 6

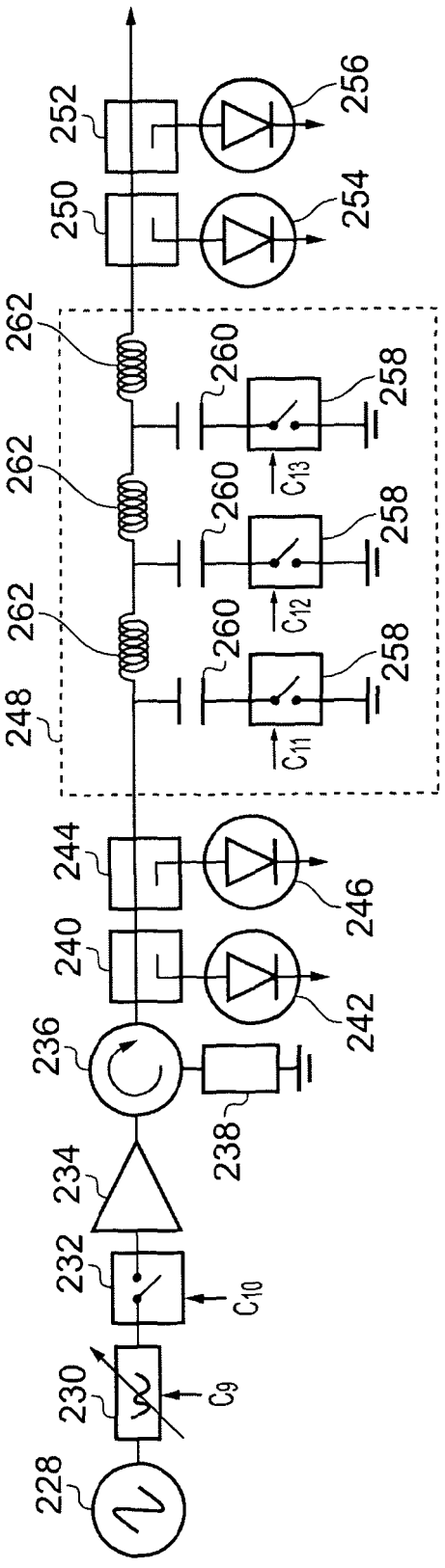



FIG. 7

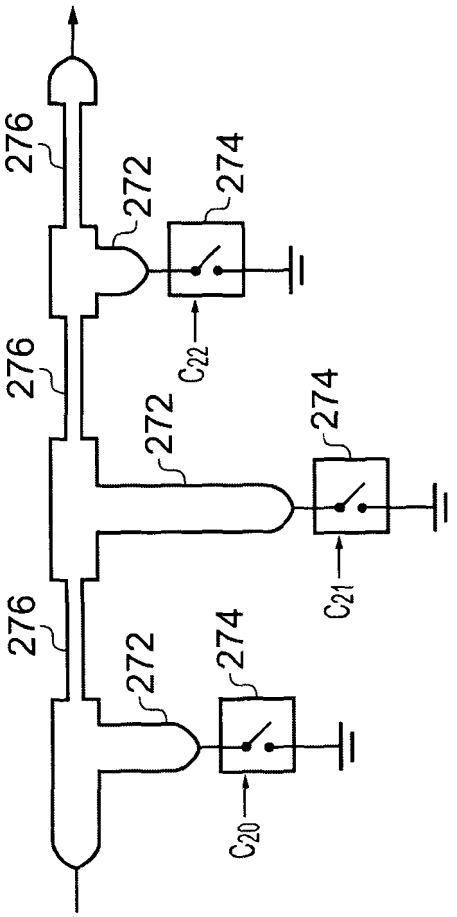



FIG. 9

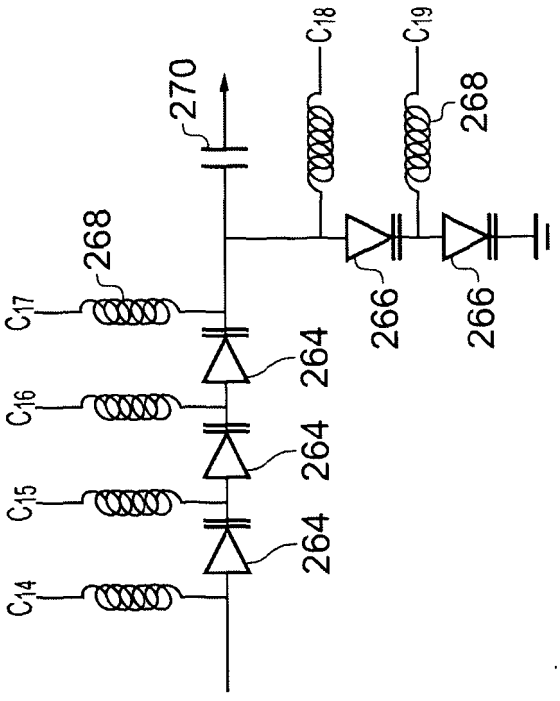



FIG. 8

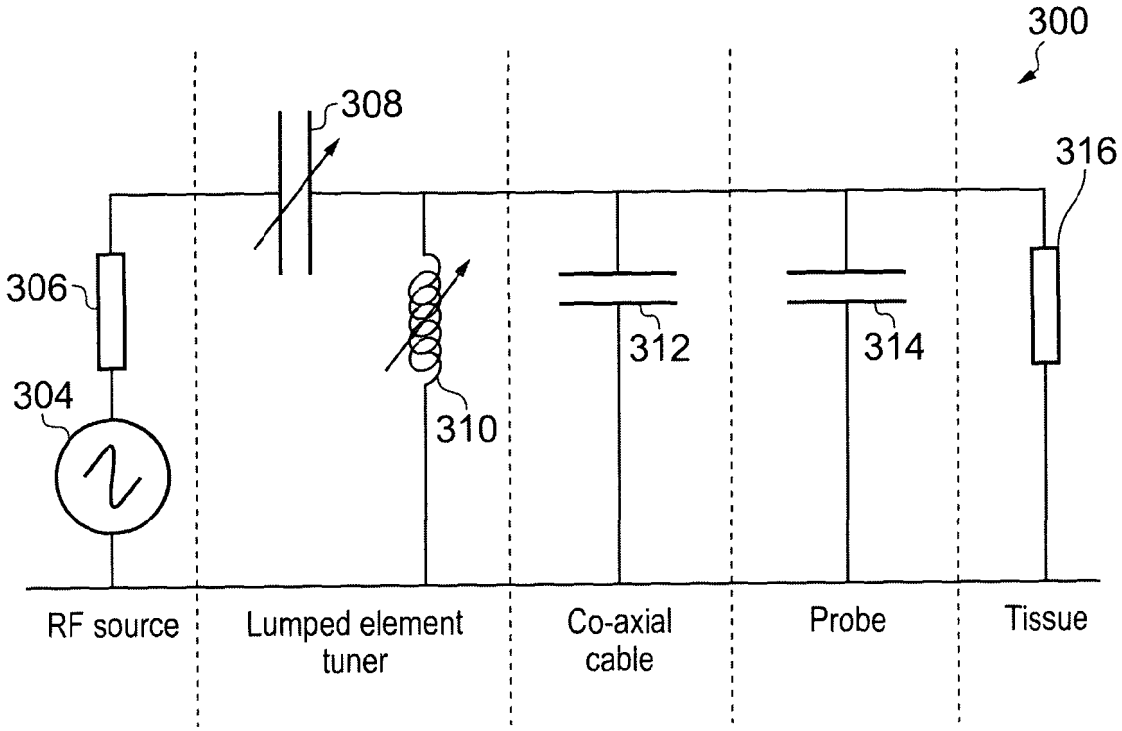

300
308
316
306
304
310
312
314
RF source
Lumped element tuner
Co-axial cable
Probe
Tissue

FIG. 10

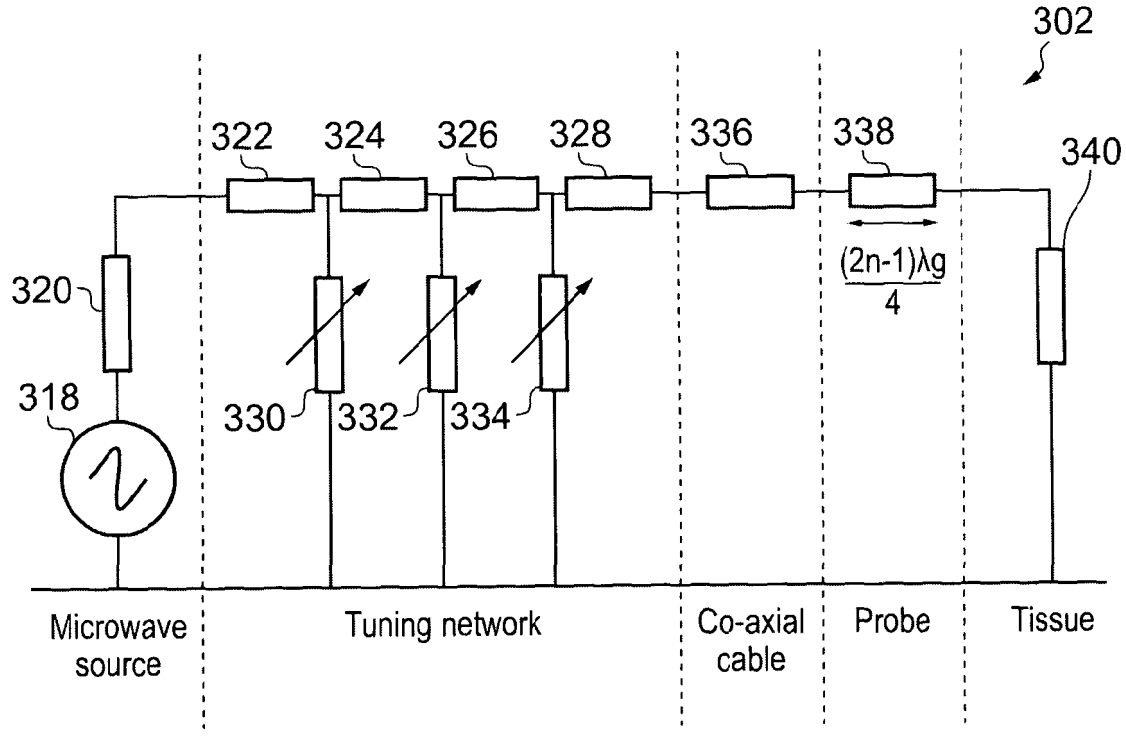

302
322
324
326
328
336
338
340
320
318
330
332
334
(2n-1)λg
4
Microwave source
Tuning network
Co-axial cable
Probe
Tissue

FIG. 11

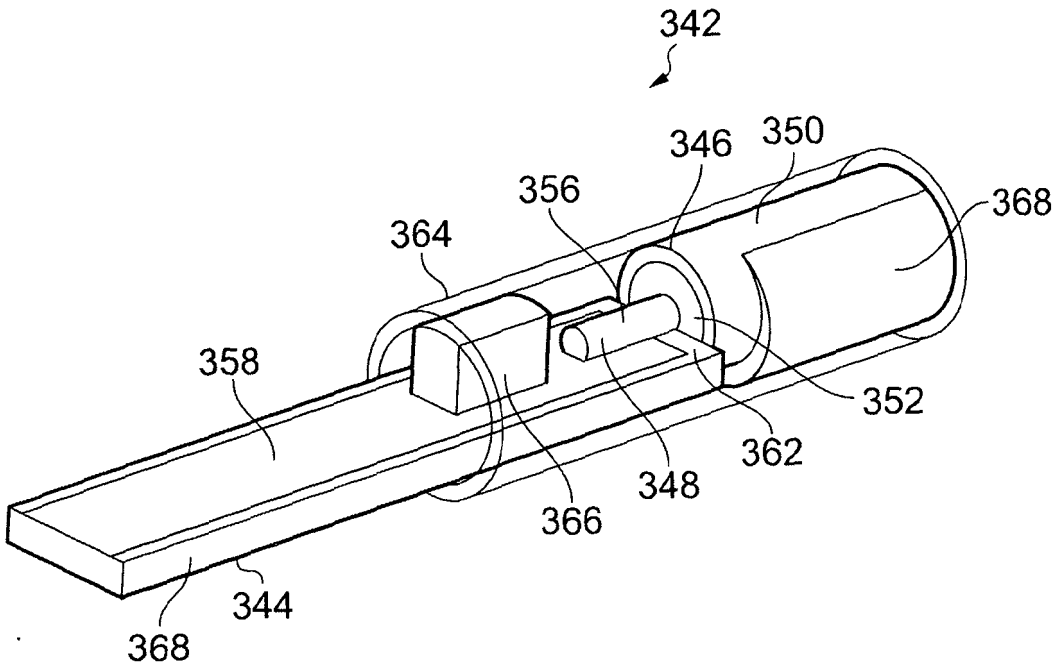

342
346
350
356
368
364
358
352
362
348
366
344
368

FIG. 12

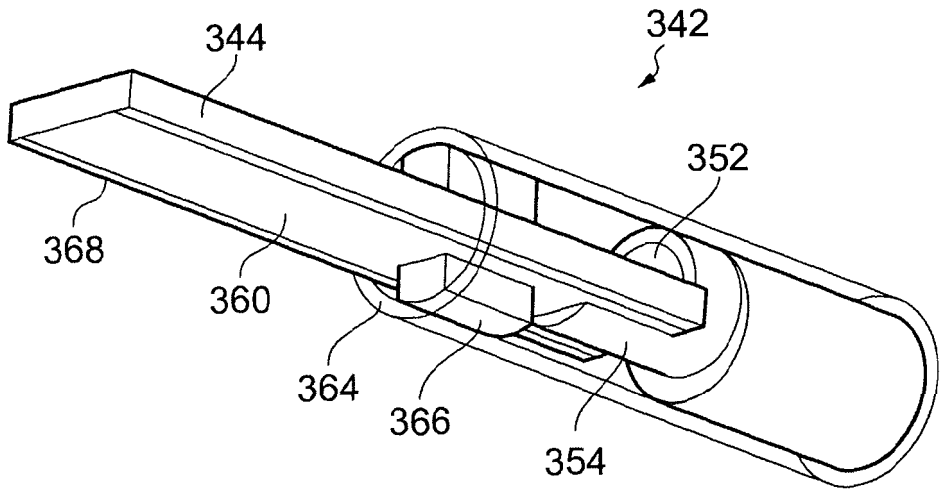

344
342
352
368
360
364
366
354

FIG. 13

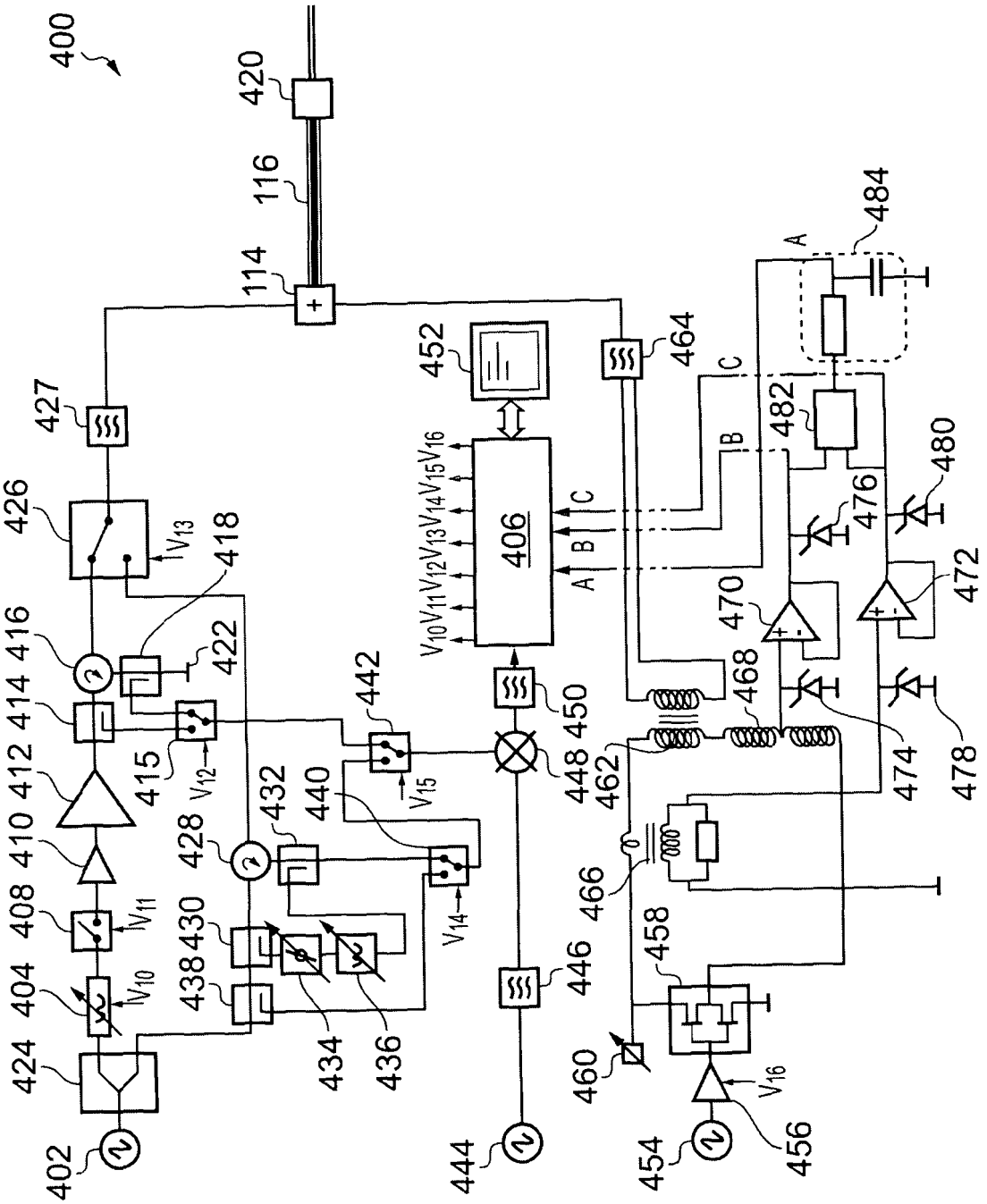

400
420
116
114
427
426
$V_{13}$
418
416
422
414
415
$V_{12}$
412
410
408
$V_{11}$
404
$V_{10}$
424
402
442
$V_{15}$
432
440
428
438
430
434
436
$V_{14}$
452
406
$V_{10}V_{11}V_{12}V_{13}V_{14}V_{15}V_{16}$
A B C
464
450
448
446
444
462
466
458
460
$V_{16}$
454
456
484
482
480
476
472
470
468
474
478

FIG. 14

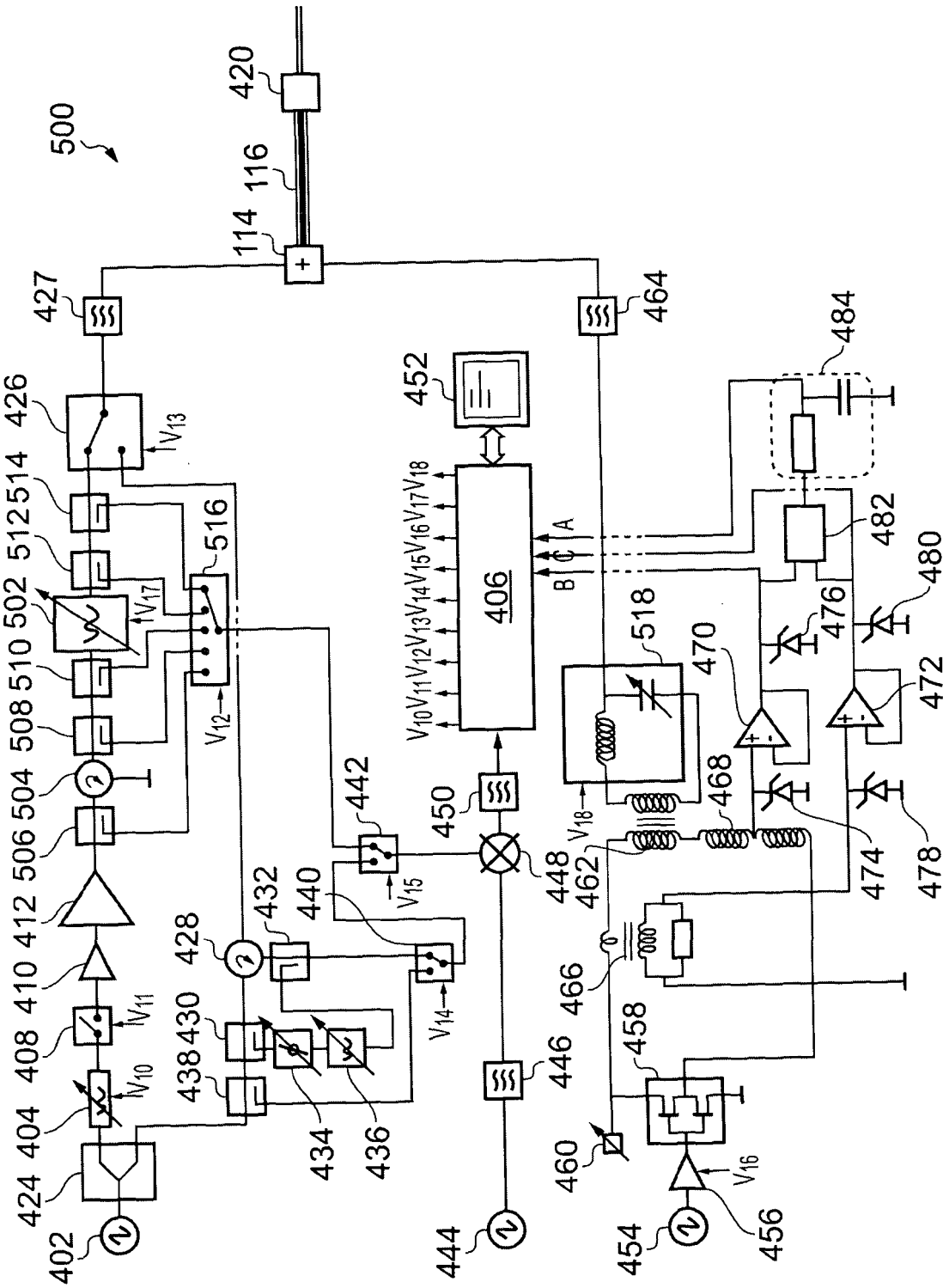

500
420
116
114
427
464
452
484
426
V13
514
512
516
482
480
502
V17
476
518
470
510
406
472
508
V12
468
504
442
450
V18
506
V15
448
462
474
478
412
432
440
428
410
V14
466
408
V11
430
458
V10
438
446
404
434
436
460
424
V16
454
456
402
444

FIG. 15

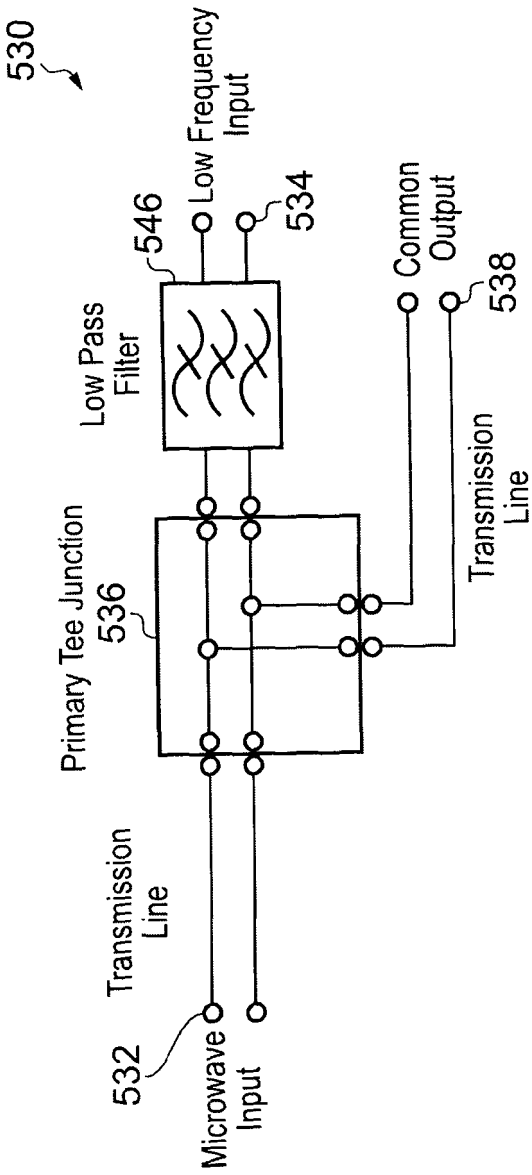

530
Low Frequency Input
546
534
Low Pass Filter
Common Output
538
Primary Tee Junction
536
Transmission Line
Transmission Line
532
Microwave Input

FIG. 16

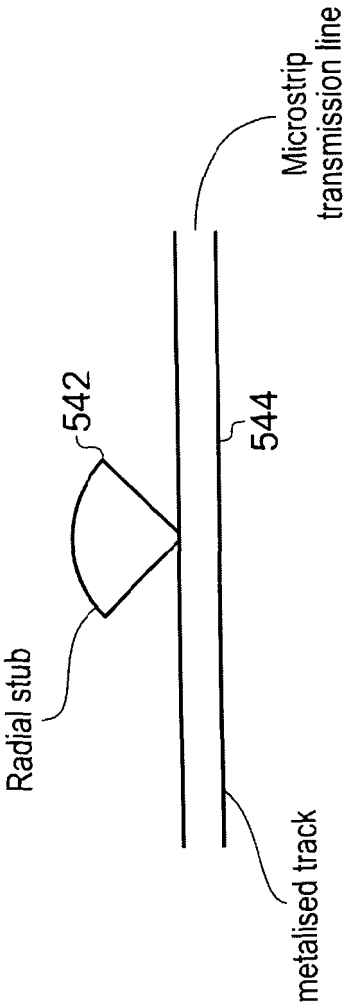

Microstrip transmission line
542
544
Radial stub
metalised track

FIG. 17

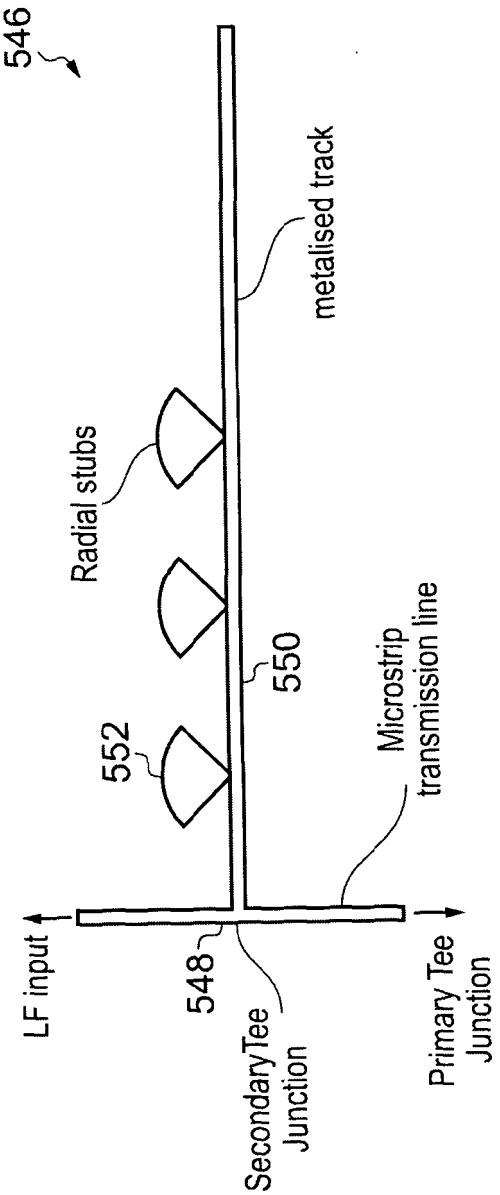

546
metalised track
Radial stubs
552
550
Microstrip transmission line
LF input
548
Secondary Tee Junction
Primary Tee Junction

FIG. 18

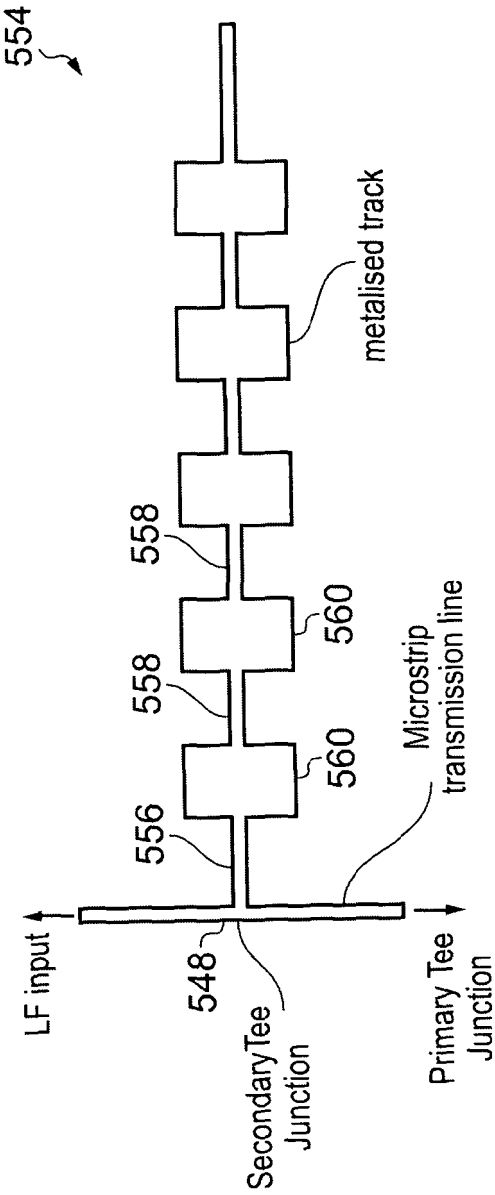

554
metalised track
558
558
560
560
556
Microstrip transmission line
LF input
548
Secondary Tee Junction
Primary Tee Junction

FIG. 19