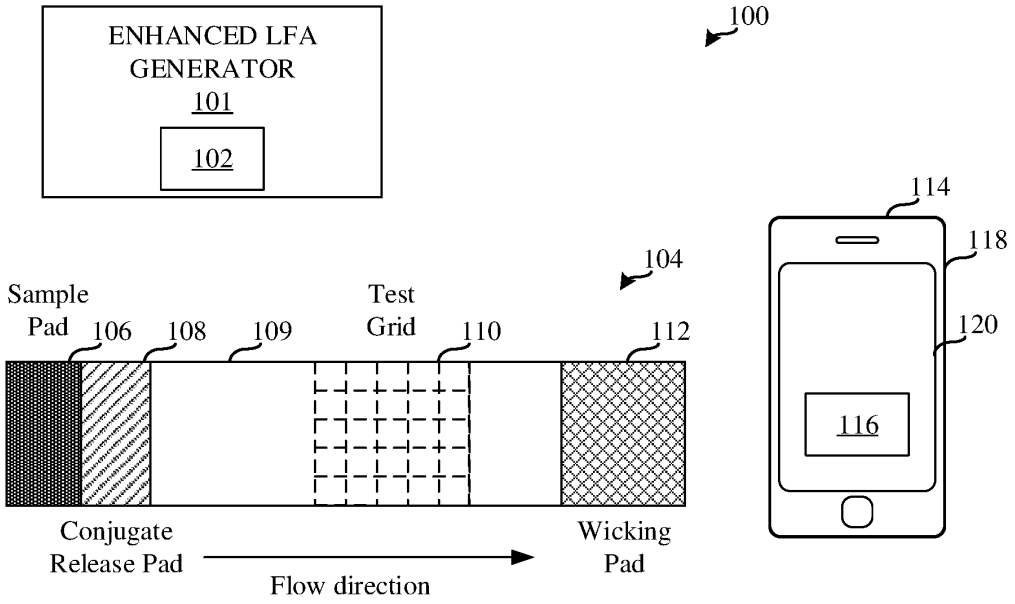

ENHANCED LFA GENERATOR
101
102
100
114
118
120
116
104
Sample Pad
106
108
109
Test Grid
110
112
Conjugate Release Pad
Flow direction
Wicking Pad

FIG. 1A

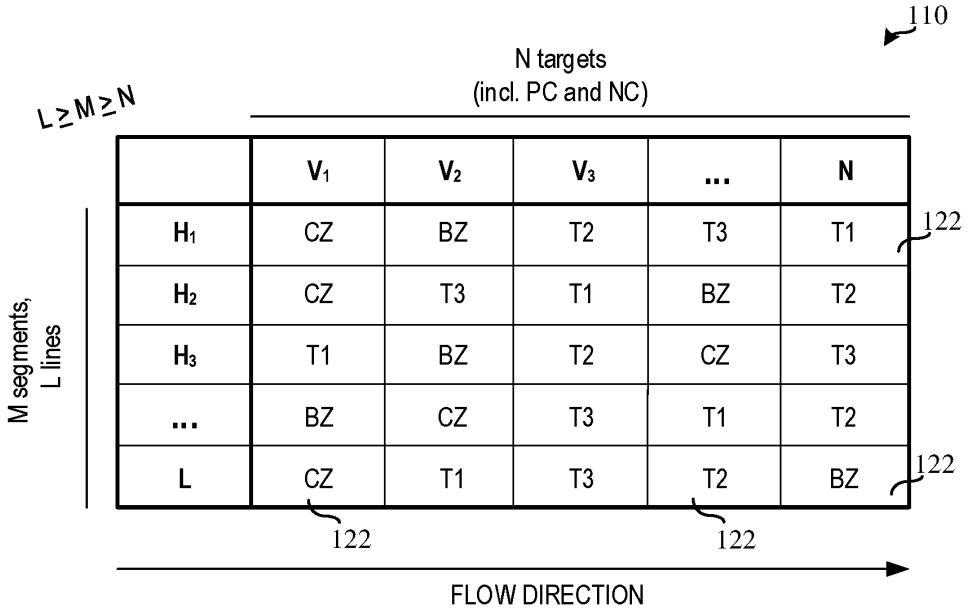

110
N targets
(incl. PC and NC)
L≥M≥N
M segments,
L lines
V1
V2
V3
...
N
H1 CZ BZ T2 T3 T1
H2 CZ T3 T1 BZ T2
H3 T1 BZ T2 CZ T3
... BZ CZ T3 T1 T2
L CZ T1 T3 T2 BZ
122
122
122
FLOW DIRECTION

FIG. 1B

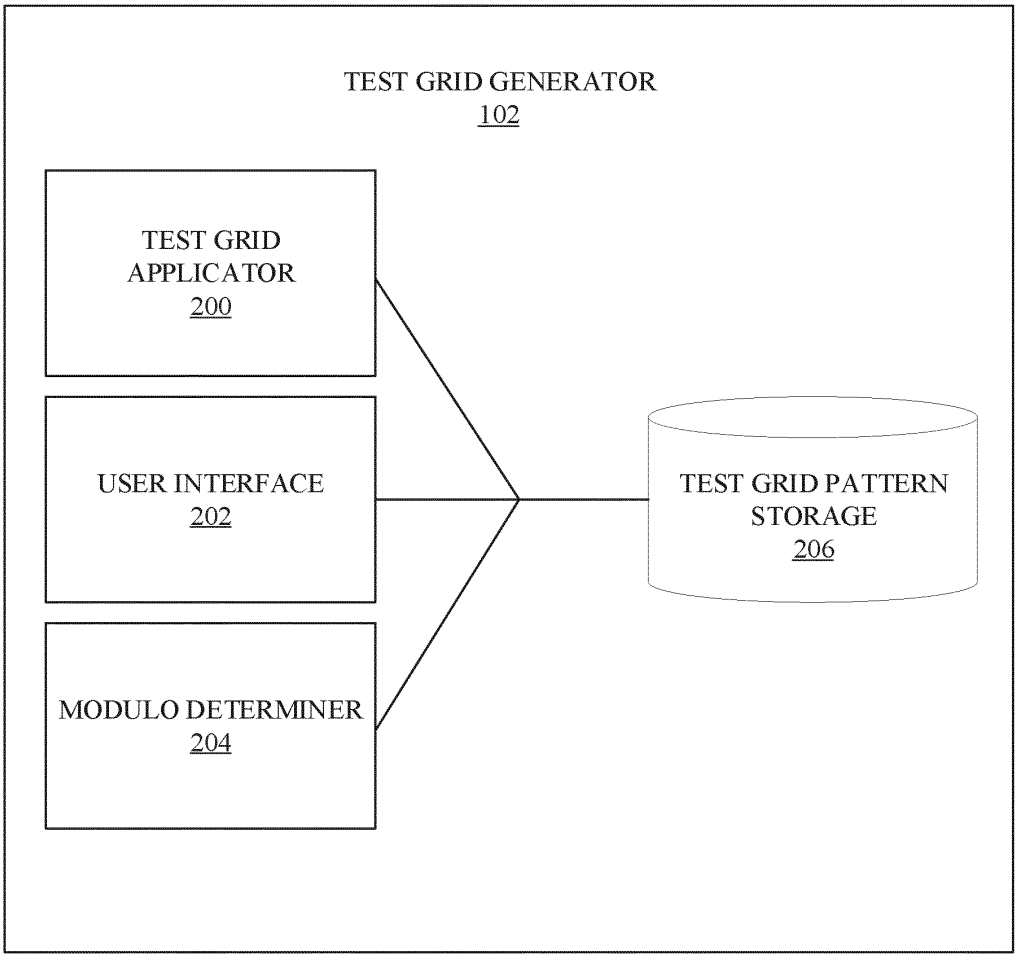

TEST GRID GENERATOR
102
TEST GRID APPLICATOR
200
USER INTERFACE
202
MODULO DETERMINER
204
TEST GRID PATTERN STORAGE
206

FIG. 2

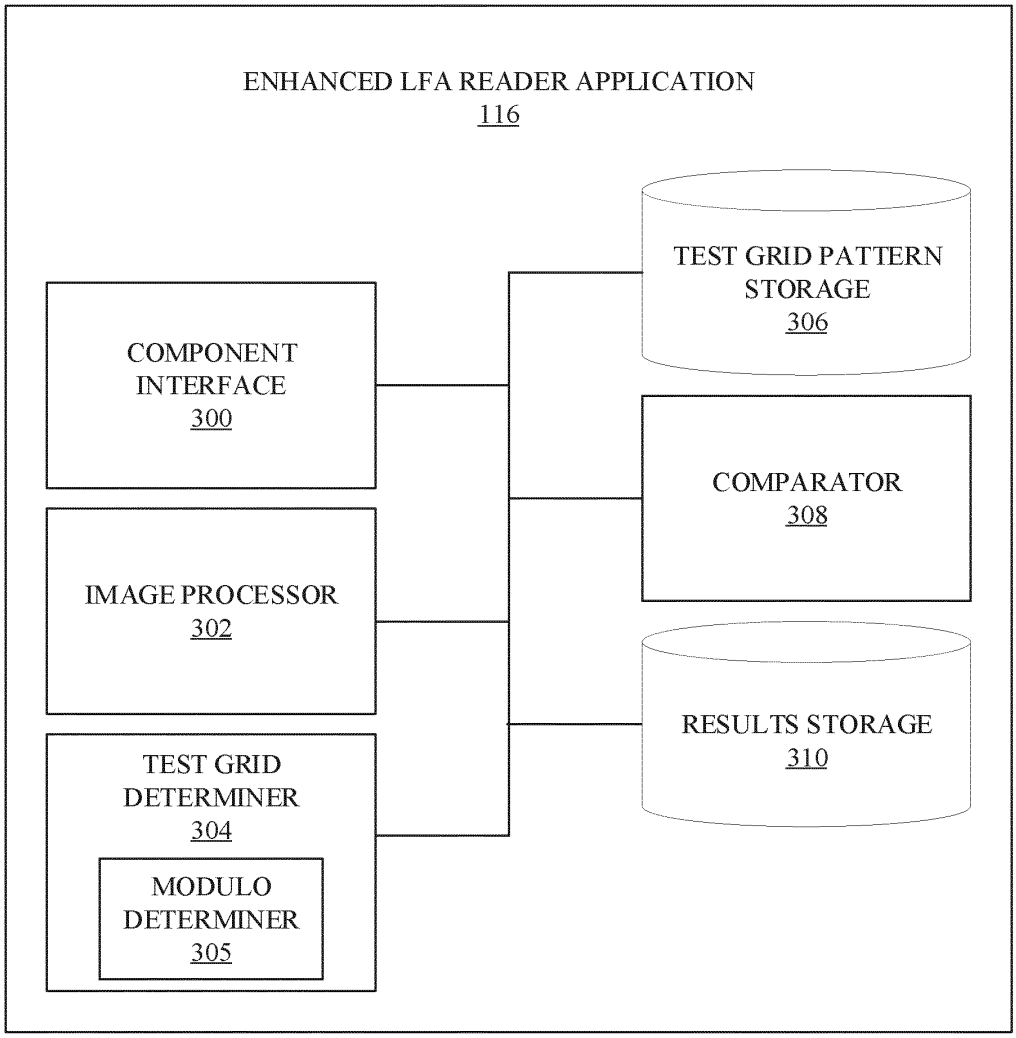

ENHANCED LFA READER APPLICATION
116
TEST GRID PATTERN STORAGE
306
COMPONENT INTERFACE
300
COMPARATOR
308
IMAGE PROCESSOR
302
RESULTS STORAGE
310
TEST GRID DETERMINER
304
MODULO DETERMINER
305

FIG. 3

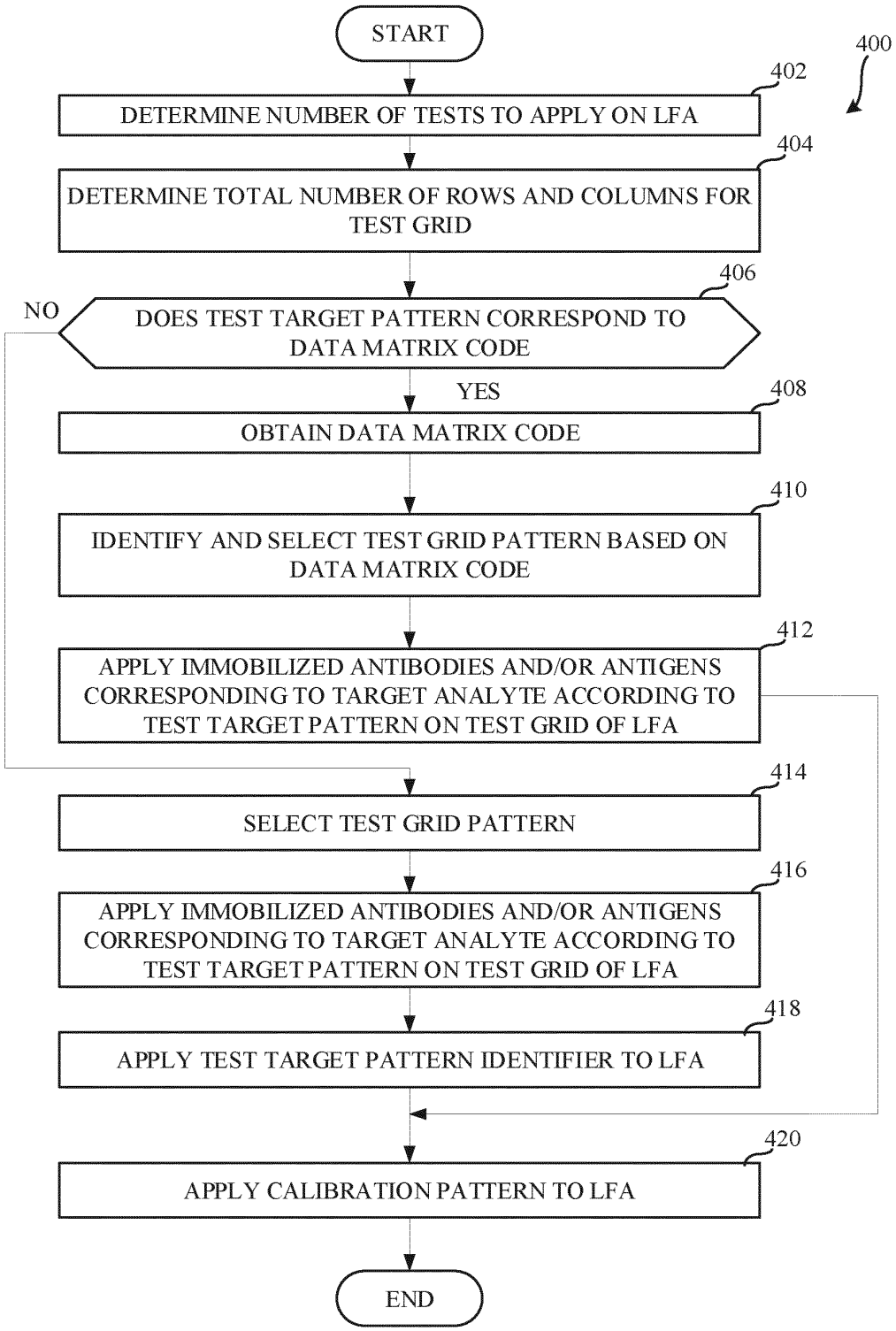

START
400
402
DETERMINE NUMBER OF TESTS TO APPLY ON LFA
404
DETERMINE TOTAL NUMBER OF ROWS AND COLUMNS FOR TEST GRID
406
NO
DOES TEST TARGET PATTERN CORRESPOND TO DATA MATRIX CODE
YES
408
OBTAIN DATA MATRIX CODE
410
IDENTIFY AND SELECT TEST GRID PATTERN BASED ON DATA MATRIX CODE
412
APPLY IMMOBILIZED ANTIBODIES AND/OR ANTIGENS CORRESPONDING TO TARGET ANALYTE ACCORDING TO TEST TARGET PATTERN ON TEST GRID OF LFA
414
SELECT TEST GRID PATTERN
416
APPLY IMMOBILIZED ANTIBODIES AND/OR ANTIGENS CORRESPONDING TO TARGET ANALYTE ACCORDING TO TEST TARGET PATTERN ON TEST GRID OF LFA
418
APPLY TEST TARGET PATTERN IDENTIFIER TO LFA
420
APPLY CALIBRATION PATTERN TO LFA
END

FIG. 4

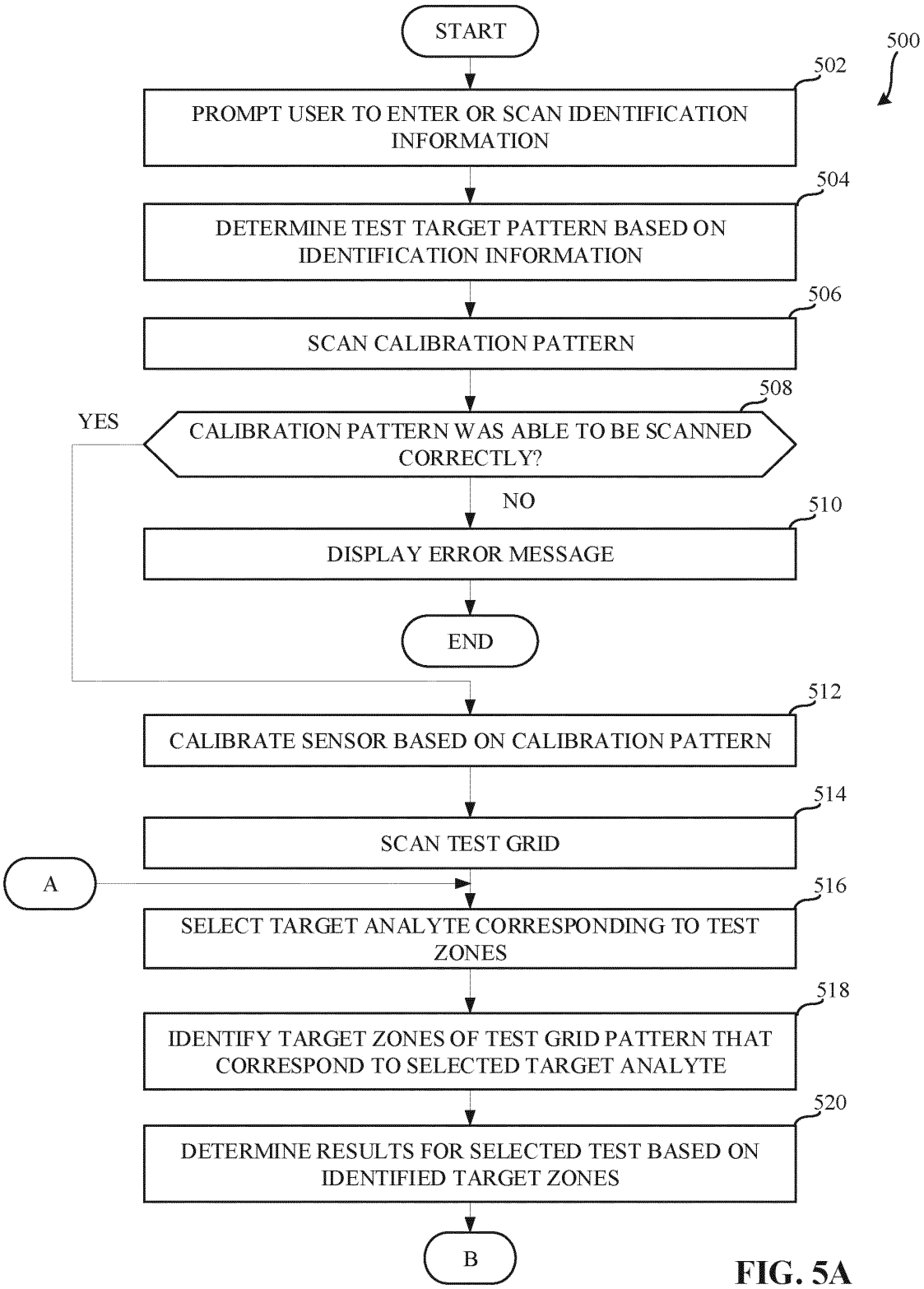

START
500
502
PROMPT USER TO ENTER OR SCAN IDENTIFICATION INFORMATION
504
DETERMINE TEST TARGET PATTERN BASED ON IDENTIFICATION INFORMATION
506
SCAN CALIBRATION PATTERN
508
YES
CALIBRATION PATTERN WAS ABLE TO BE SCANNED CORRECTLY?
NO
510
DISPLAY ERROR MESSAGE
END
512
CALIBRATE SENSOR BASED ON CALIBRATION PATTERN
514
SCAN TEST GRID
A
516
SELECT TARGET ANALYTE CORRESPONDING TO TEST ZONES
518
IDENTIFY TARGET ZONES OF TEST GRID PATTERN THAT CORRESPOND TO SELECTED TARGET ANALYTE
520
DETERMINE RESULTS FOR SELECTED TEST BASED ON IDENTIFIED TARGET ZONES
B

FIG. 5A

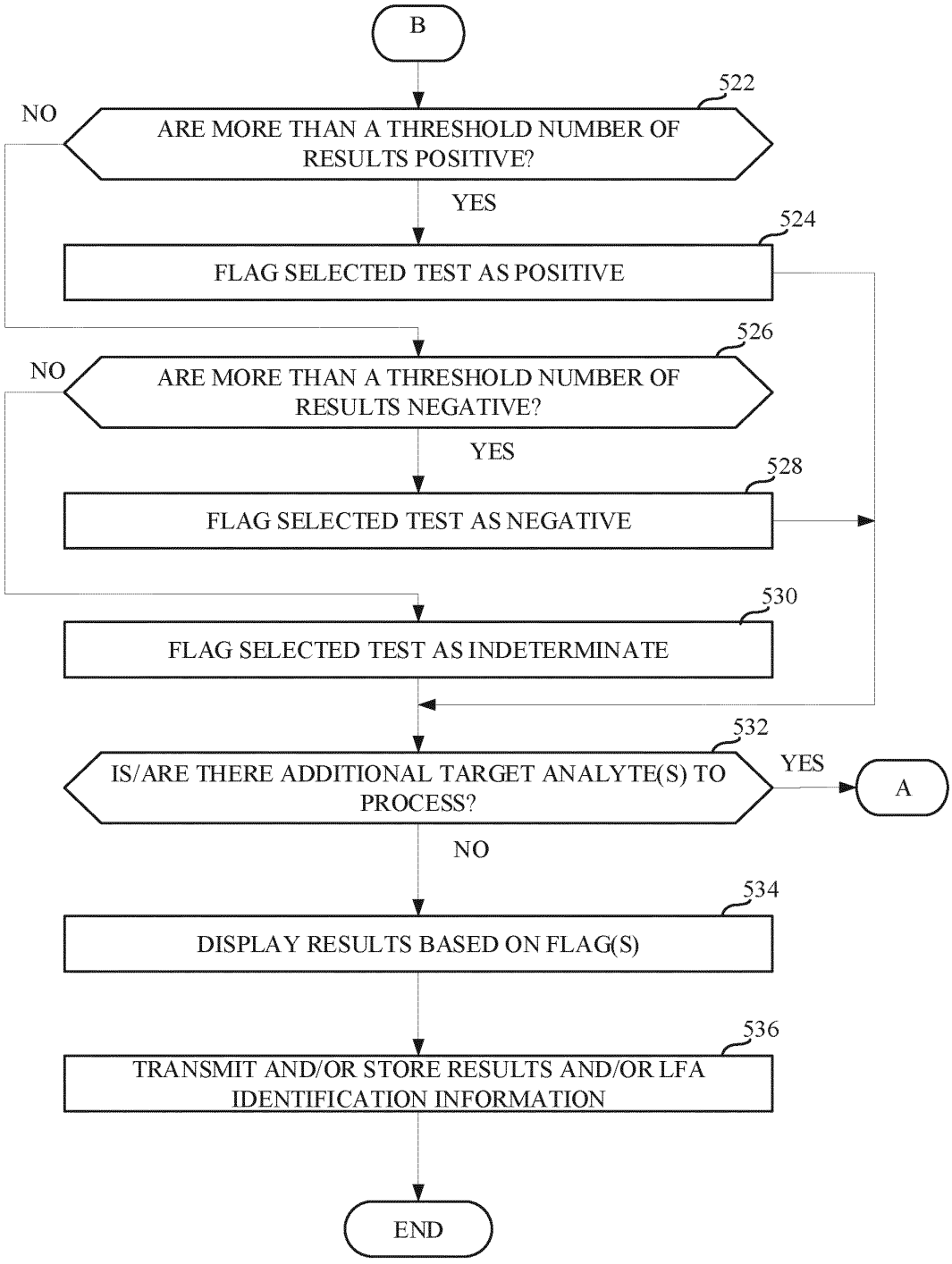

B
522
NO
ARE MORE THAN A THRESHOLD NUMBER OF RESULTS POSITIVE?
YES
524
FLAG SELECTED TEST AS POSITIVE
526
NO
ARE MORE THAN A THRESHOLD NUMBER OF RESULTS NEGATIVE?
YES
528
FLAG SELECTED TEST AS NEGATIVE
530
FLAG SELECTED TEST AS INDETERMINATE
532
IS/ARE THERE ADDITIONAL TARGET ANALYTE(S) TO PROCESS?
YES
A
NO
534
DISPLAY RESULTS BASED ON FLAG(S)
536
TRANSMIT AND/OR STORE RESULTS AND/OR LFA IDENTIFICATION INFORMATION
END

FIG. 5B

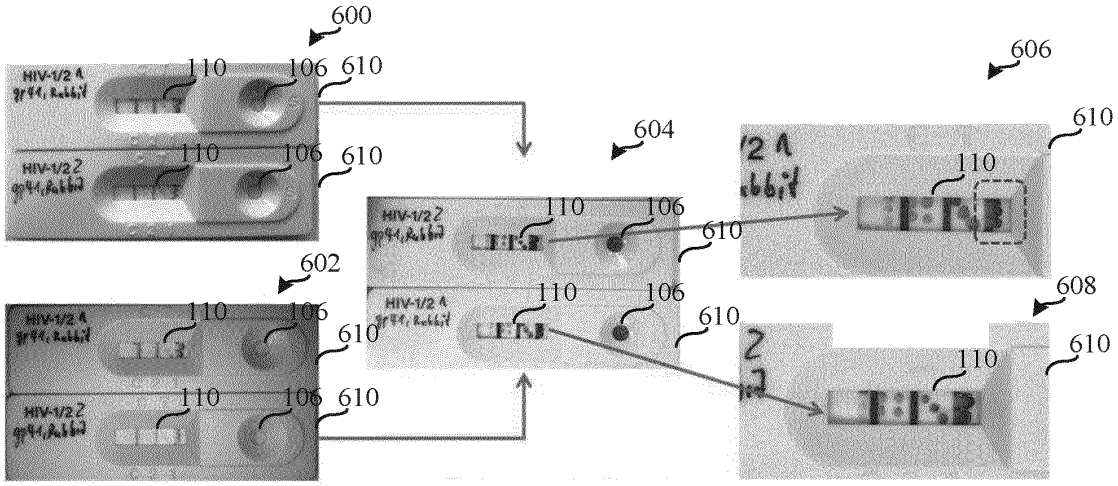


FIG. 6

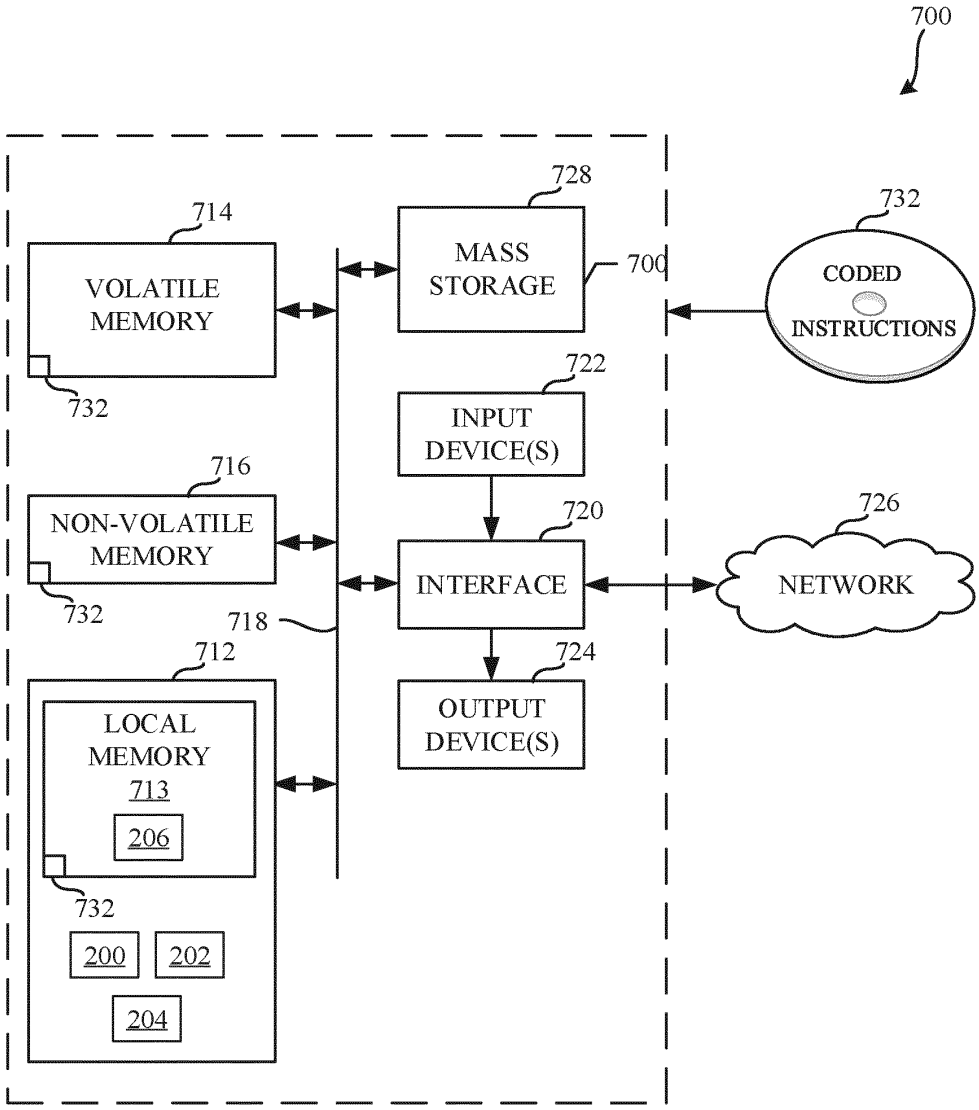

700
728
714
732
MASS STORAGE
700
VOLATILE MEMORY
CODED INSTRUCTIONS
732
722
INPUT DEVICE(S)
716
726
NON-VOLATILE MEMORY
720
INTERFACE
NETWORK
732
718
712
724
OUTPUT DEVICE(S)
LOCAL MEMORY 713
206
732
200
202
204

FIG. 7

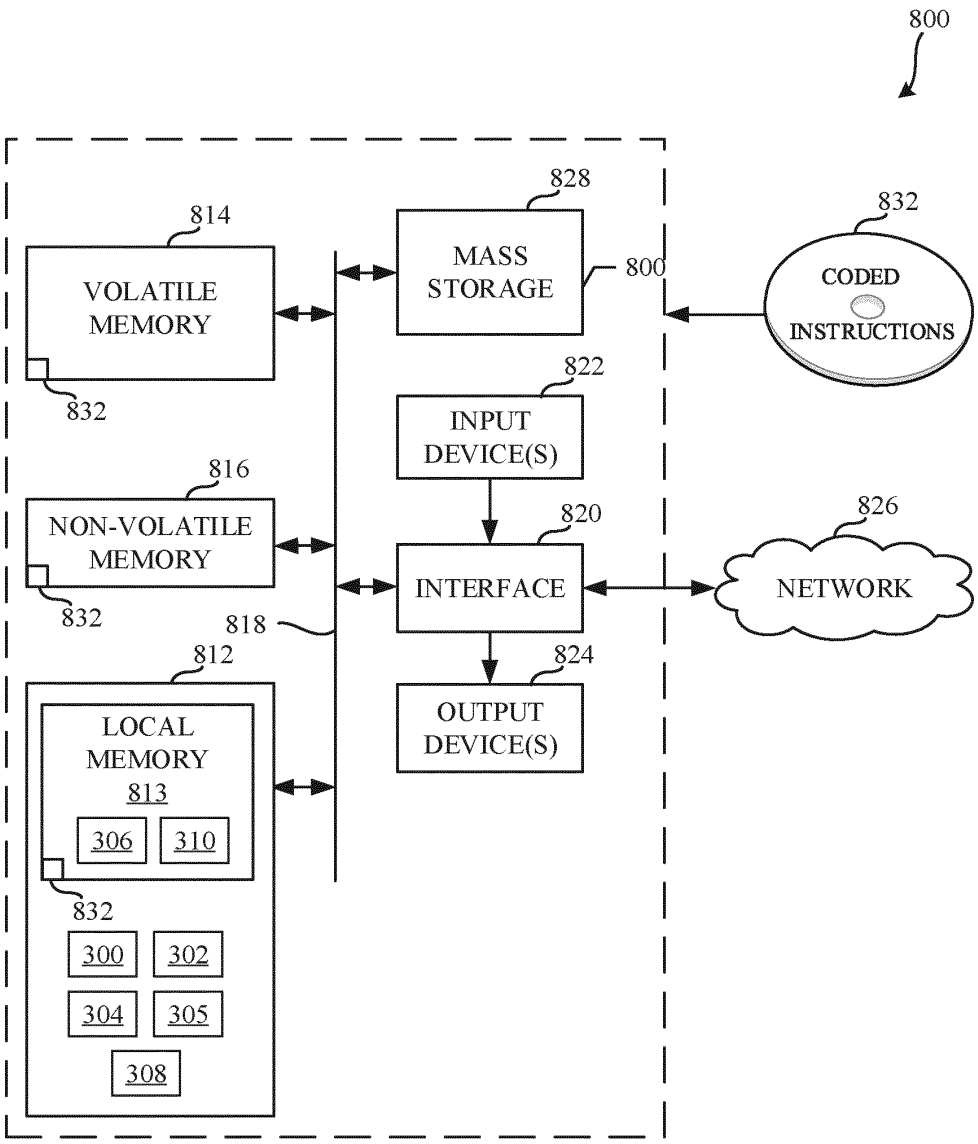

800
828
814
832
MASS STORAGE
800
VOLATILE MEMORY
832
CODED INSTRUCTIONS
822
INPUT DEVICE(S)
816
826
NON-VOLATILE MEMORY
820
INTERFACE
NETWORK
832
818
812
824
OUTPUT DEVICE(S)
LOCAL MEMORY 813
306
310
832
300
302
304
305
308

FIG. 8