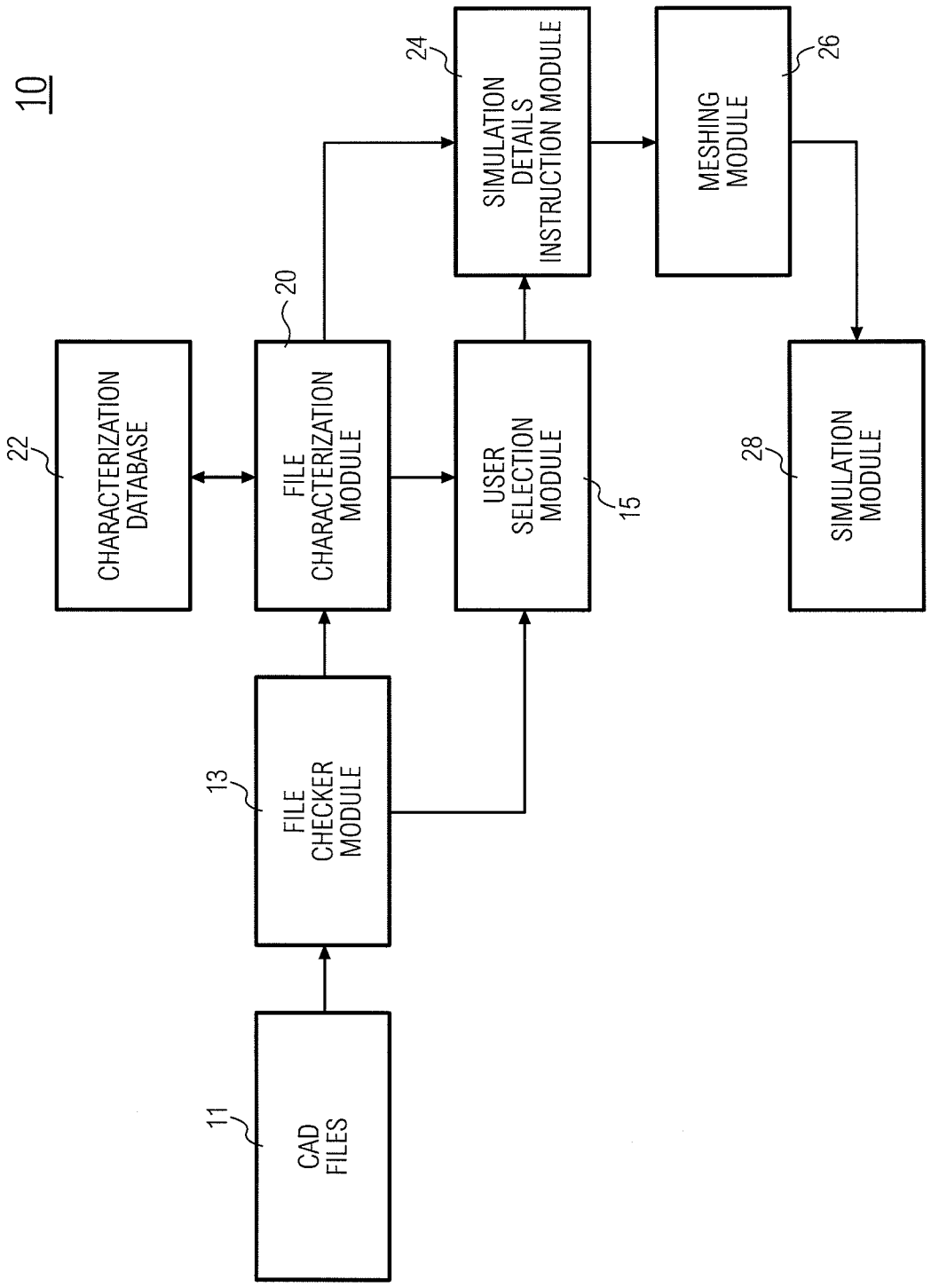

10
CAD FILES
11
FILE CHECKER MODULE
13
FILE CHARACTERIZATION MODULE
20
CHARACTERIZATION DATABASE
22
USER SELECTION MODULE
15
SIMULATION DETAILS INSTRUCTION MODULE
24
MESHING MODULE
26
SIMULATION MODULE
28

FIG. 1

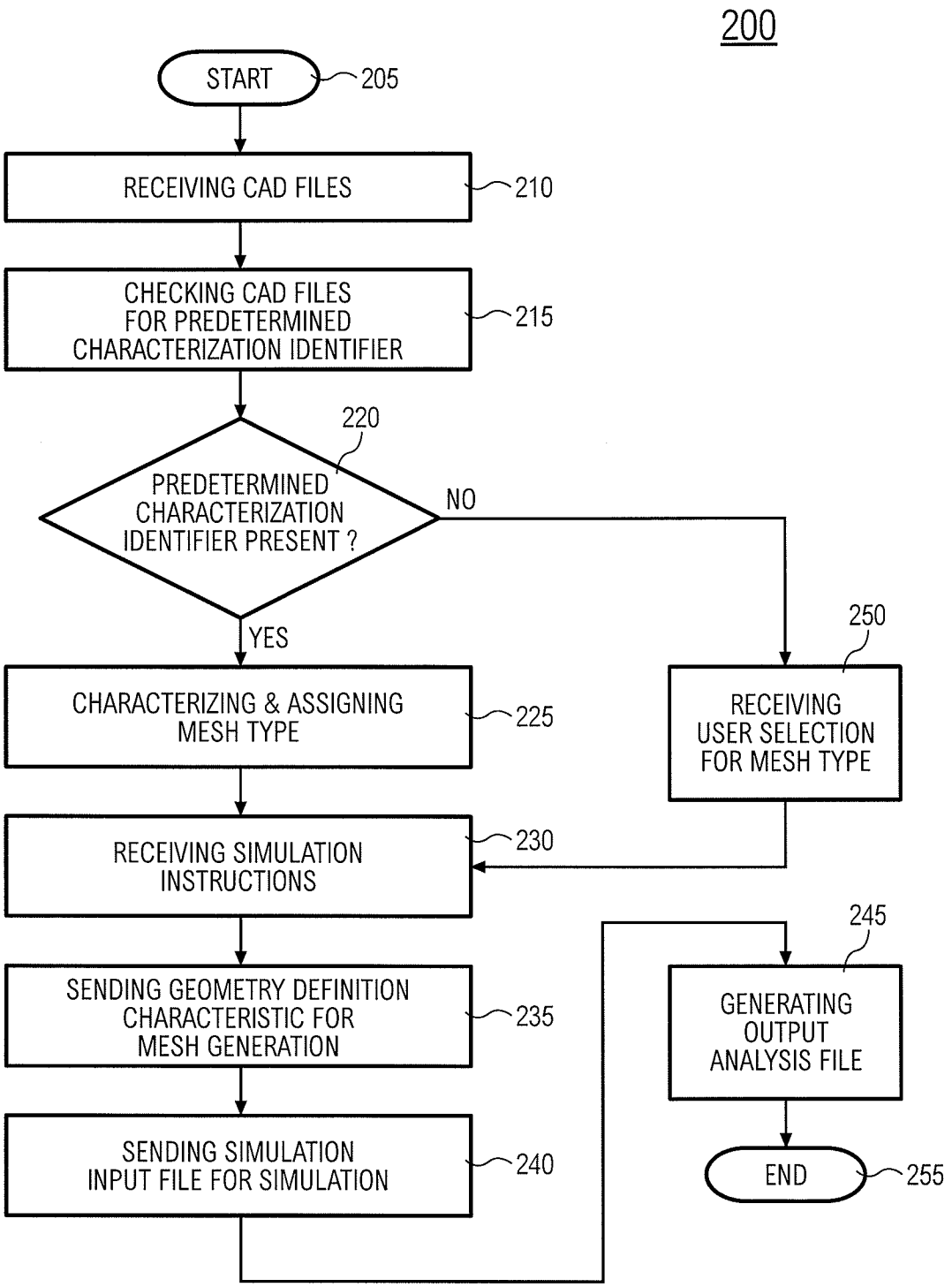

200
START
205
RECEIVING CAD FILES
210
CHECKING CAD FILES FOR PREDETERMINED CHARACTERIZATION IDENTIFIER
215
220
PREDETERMINED CHARACTERIZATION IDENTIFIER PRESENT ?
NO
YES
250
CHARACTERIZING & ASSIGNING MESH TYPE
225
RECEIVING USER SELECTION FOR MESH TYPE
RECEIVING SIMULATION INSTRUCTIONS
230
245
SENDING GEOMETRY DEFINITION CHARACTERISTIC FOR MESH GENERATION
235
GENERATING OUTPUT ANALYSIS FILE
SENDING SIMULATION INPUT FILE FOR SIMULATION
240
END
255

FIG. 2

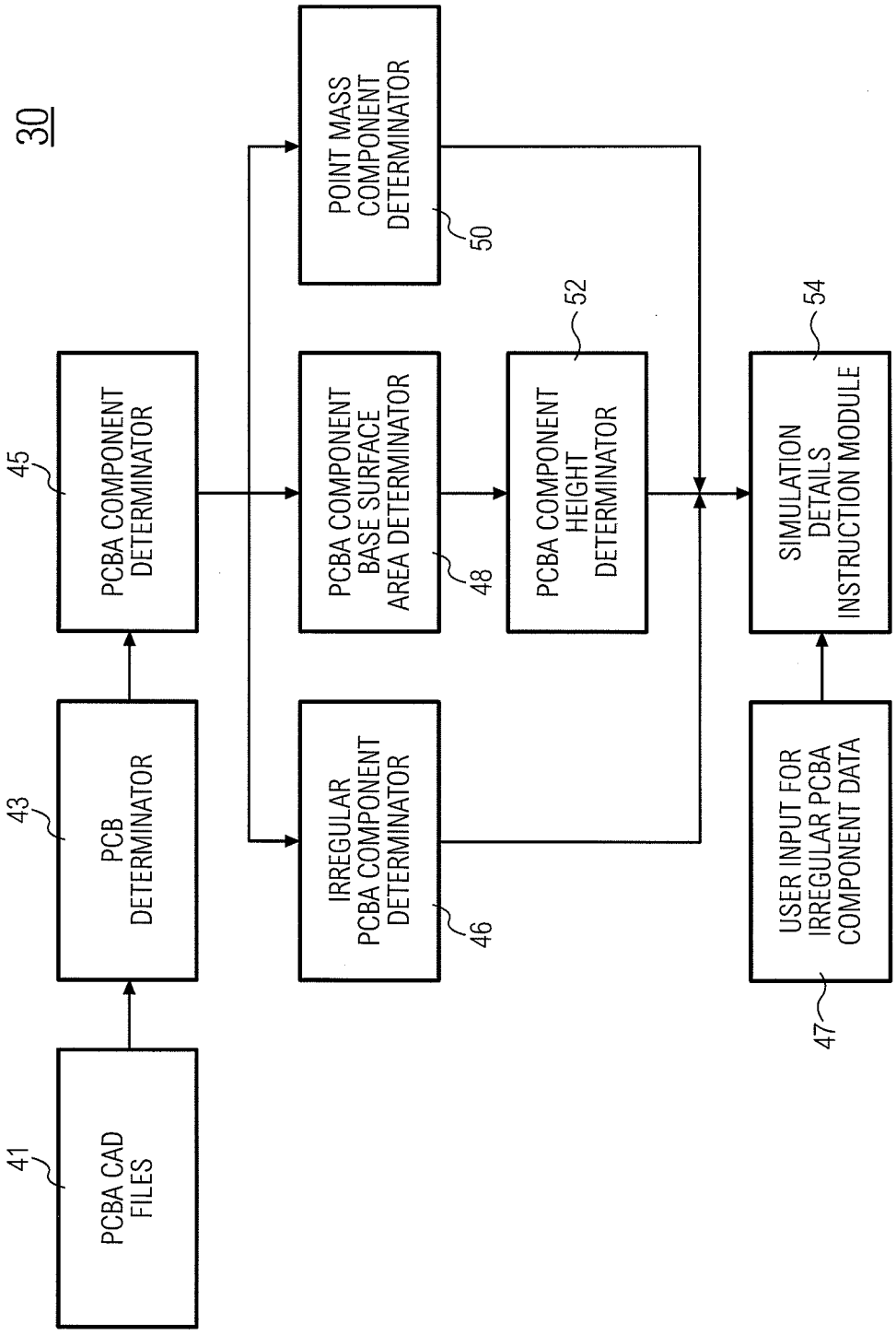

30
PCBA CAD FILES
41
PCB DETERMINATOR
43
PCBA COMPONENT DETERMINATOR
45
POINT MASS COMPONENT DETERMINATOR
50
PCBA COMPONENT BASE SURFACE AREA DETERMINATOR
48
IRREGULAR PCBA COMPONENT DETERMINATOR
46
PCBA COMPONENT HEIGHT DETERMINATOR
52
SIMULATION DETAILS INSTRUCTION MODULE
54
USER INPUT FOR IRREGULAR PCBA COMPONENT DATA
47

FIG. 3

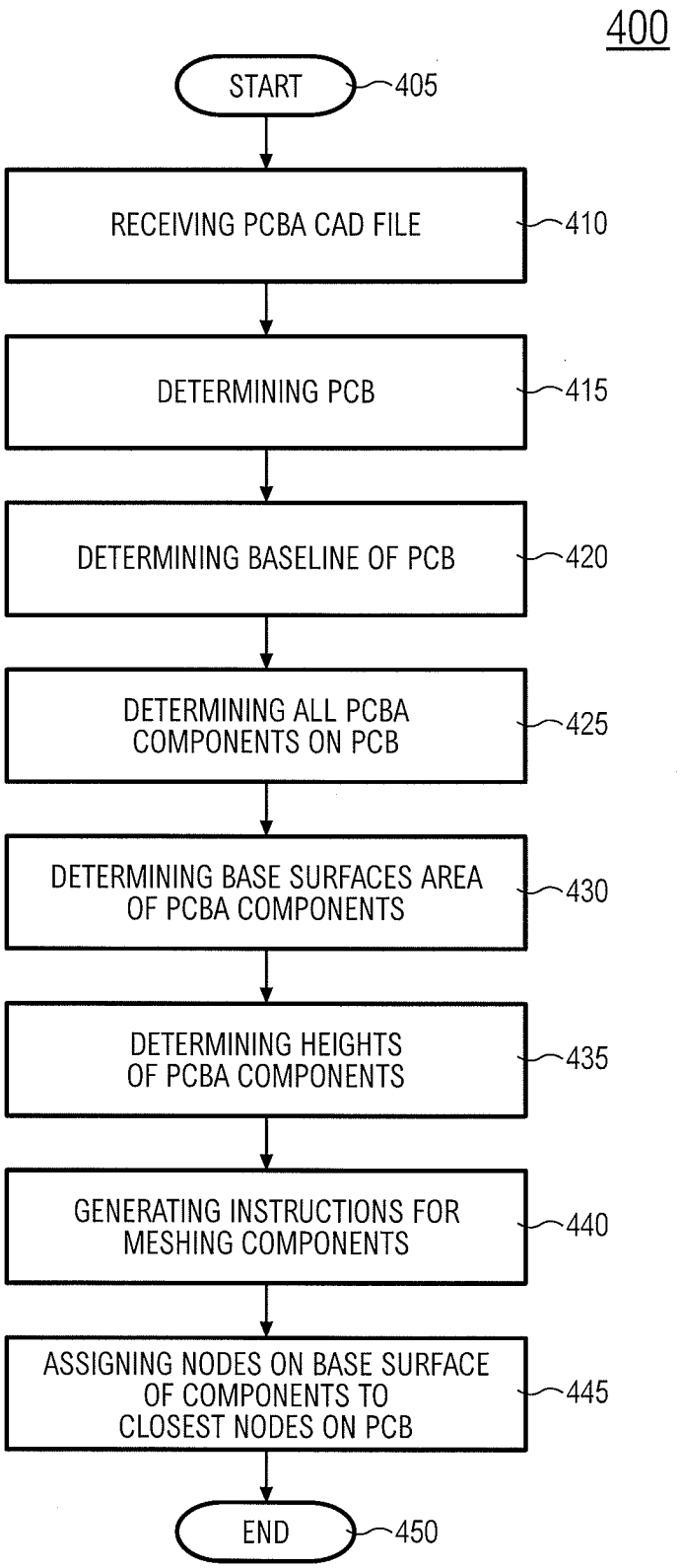

400
START
405
RECEIVING PCBA CAD FILE
410
DETERMINING PCB
415
DETERMINING BASELINE OF PCB
420
DETERMINING ALL PCBA COMPONENTS ON PCB
425
DETERMINING BASE SURFACES AREA OF PCBA COMPONENTS
430
DETERMINING HEIGHTS OF PCBA COMPONENTS
435
GENERATING INSTRUCTIONS FOR MESHING COMPONENTS
440
ASSIGNING NODES ON BASE SURFACE OF COMPONENTS TO CLOSEST NODES ON PCB
445
END
450

FIG. 4