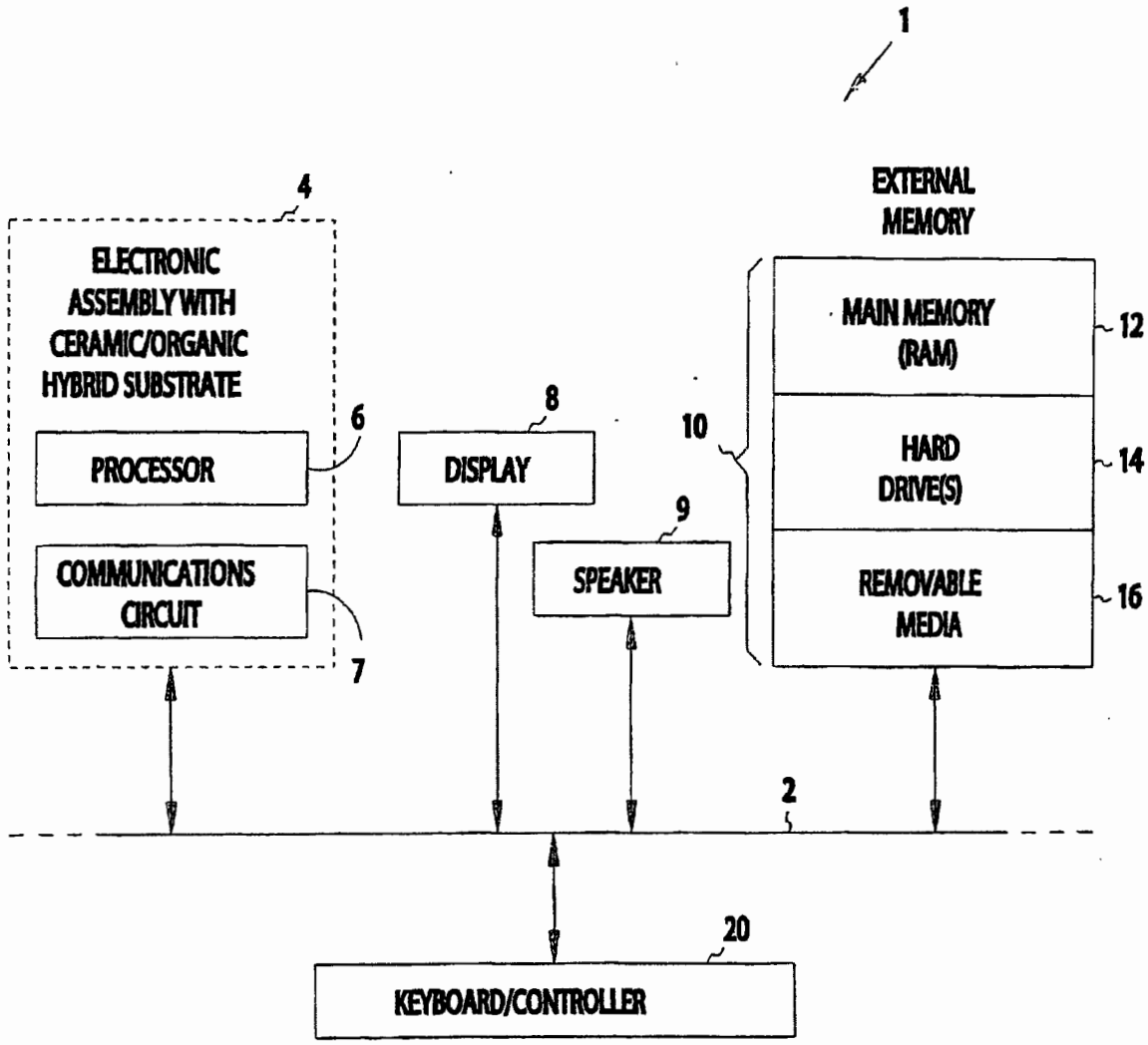

1
4
ELECTRONIC ASSEMBLY WITH CERAMIC/ORGANIC HYBRID SUBSTRATE
PROCESSOR
6
COMMUNICATIONS CIRCUIT
7
8
DISPLAY
9
SPEAKER
10
EXTERNAL MEMORY
MAIN MEMORY (RAM)
12
HARD DRIVE(S)
14
REMOVABLE MEDIA
16
2
20
KEYBOARD/CONTROLLER

FIG. 1

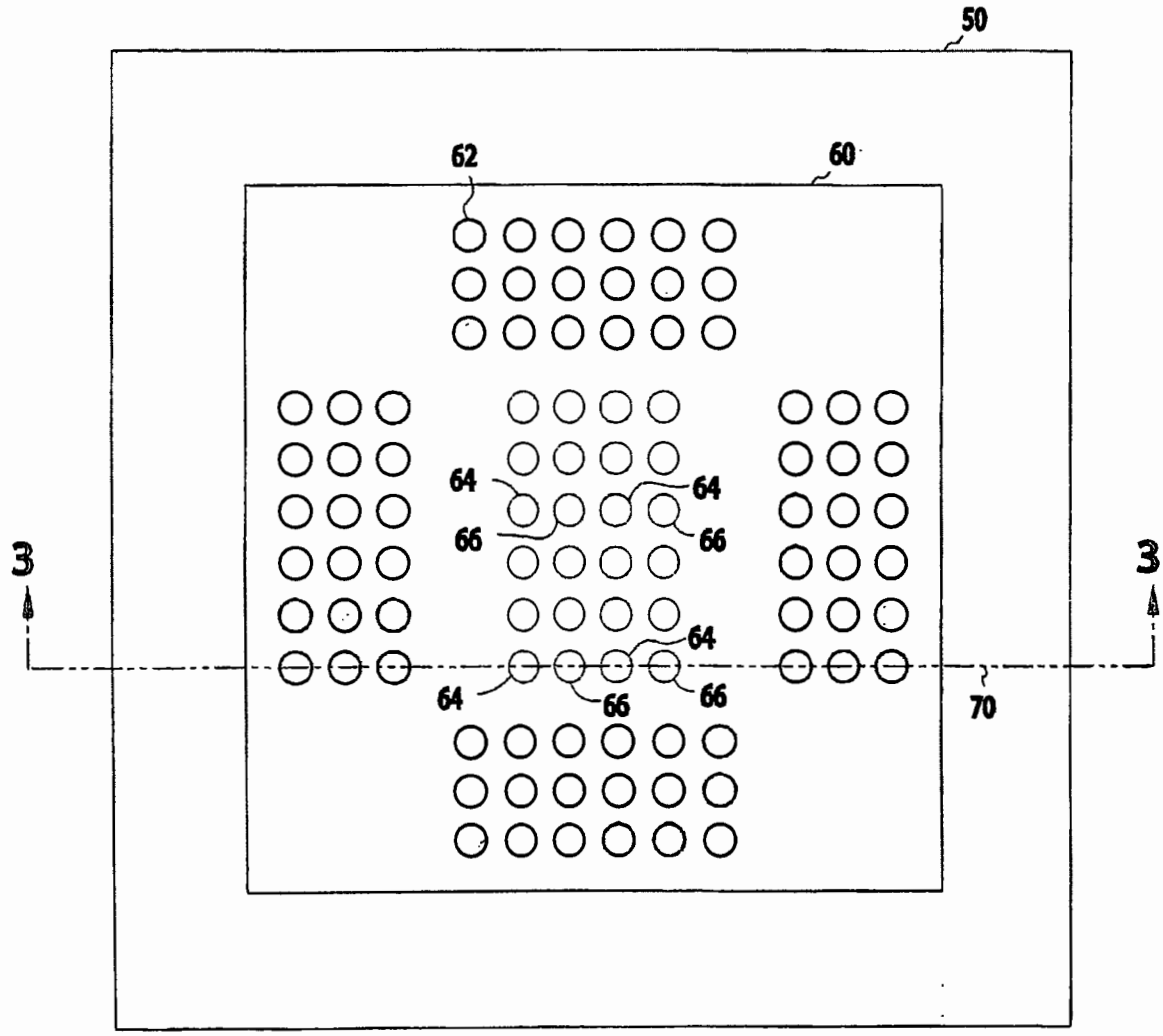


FIG. 2

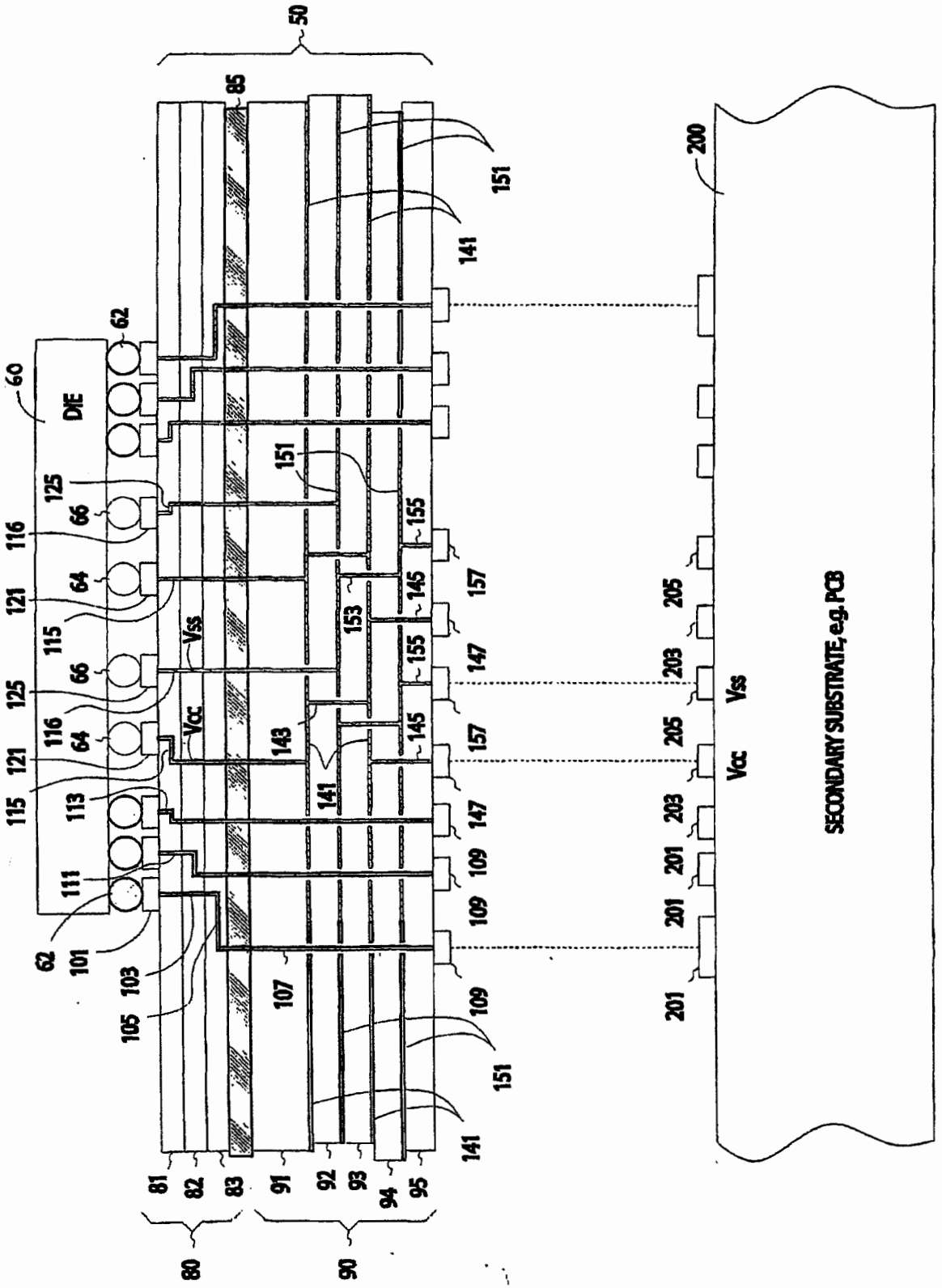

50
85
151
141
62
60
DIE
125
66
116
64
121
115
Vss
Vcc
143
153
155
145
157
147
109
107
103
105
101
111
113
81
82
83
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92
93
94
95
80
90
200
205
203
201
SECONDARY SUBSTRATE, e.g. PCB

FIG. 3

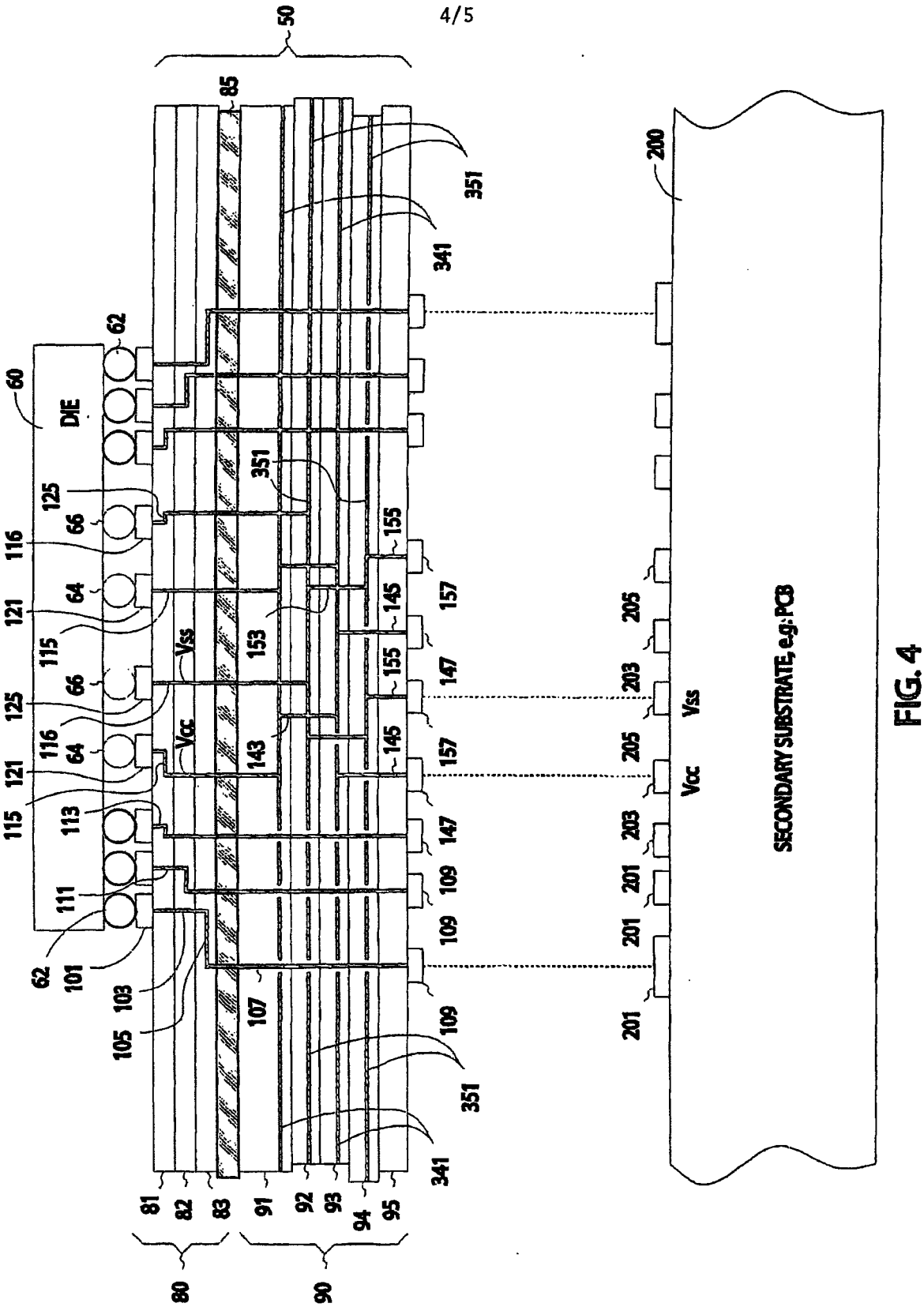

50
85
351
341
62
60
DIE
125
66
116
64
121
115
113
111
101
103
105
107
109
155
145
157
147
153
143
Vss
Vcc
200
205
203
201
SECONDARY SUBSTRATE, e.g. PCB
81
82
83
91
92
93
94
95
80
90

FIG. 4

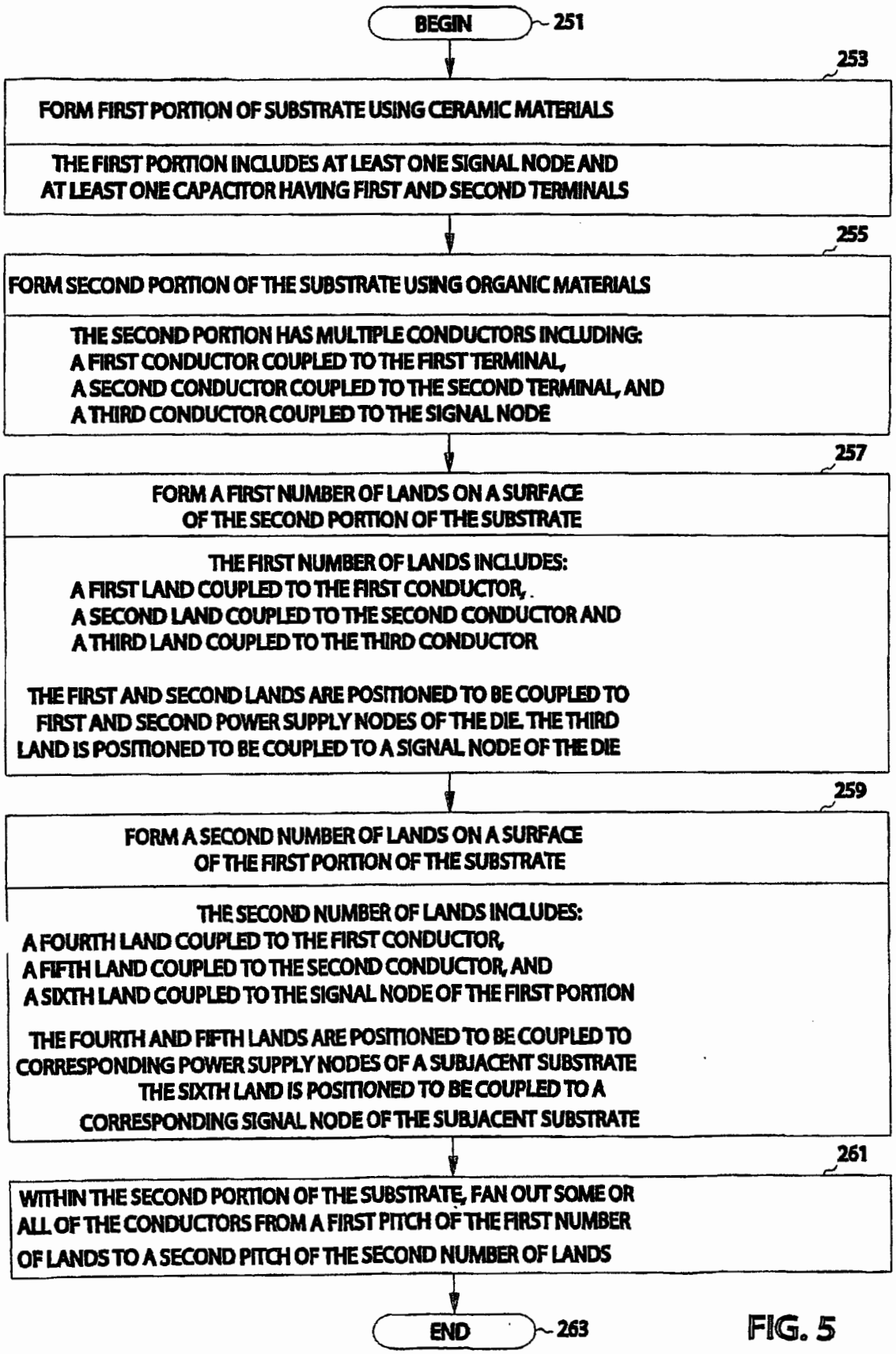

BEGIN
251
253
FORM FIRST PORTION OF SUBSTRATE USING CERAMIC MATERIALS
THE FIRST PORTION INCLUDES AT LEAST ONE SIGNAL NODE AND AT LEAST ONE CAPACITOR HAVING FIRST AND SECOND TERMINALS
255
FORM SECOND PORTION OF THE SUBSTRATE USING ORGANIC MATERIALS
THE SECOND PORTION HAS MULTIPLE CONDUCTORS INCLUDING:
A FIRST CONDUCTOR COUPLED TO THE FIRST TERMINAL,
A SECOND CONDUCTOR COUPLED TO THE SECOND TERMINAL, AND
A THIRD CONDUCTOR COUPLED TO THE SIGNAL NODE
257
FORM A FIRST NUMBER OF LANDS ON A SURFACE OF THE SECOND PORTION OF THE SUBSTRATE
THE FIRST NUMBER OF LANDS INCLUDES:
A FIRST LAND COUPLED TO THE FIRST CONDUCTOR,
A SECOND LAND COUPLED TO THE SECOND CONDUCTOR AND
A THIRD LAND COUPLED TO THE THIRD CONDUCTOR
THE FIRST AND SECOND LANDS ARE POSITIONED TO BE COUPLED TO FIRST AND SECOND POWER SUPPLY NODES OF THE DIE. THE THIRD LAND IS POSITIONED TO BE COUPLED TO A SIGNAL NODE OF THE DIE
259
FORM A SECOND NUMBER OF LANDS ON A SURFACE OF THE FIRST PORTION OF THE SUBSTRATE
THE SECOND NUMBER OF LANDS INCLUDES:
A FOURTH LAND COUPLED TO THE FIRST CONDUCTOR,
A FIFTH LAND COUPLED TO THE SECOND CONDUCTOR, AND
A SIXTH LAND COUPLED TO THE SIGNAL NODE OF THE FIRST PORTION
THE FOURTH AND FIFTH LANDS ARE POSITIONED TO BE COUPLED TO CORRESPONDING POWER SUPPLY NODES OF A SUBJACENT SUBSTRATE
THE SIXTH LAND IS POSITIONED TO BE COUPLED TO A CORRESPONDING SIGNAL NODE OF THE SUBJACENT SUBSTRATE
261
WITHIN THE SECOND PORTION OF THE SUBSTRATE, FAN OUT SOME OR ALL OF THE CONDUCTORS FROM A FIRST PITCH OF THE FIRST NUMBER OF LANDS TO A SECOND PITCH OF THE SECOND NUMBER OF LANDS
END
263

FIG. 5