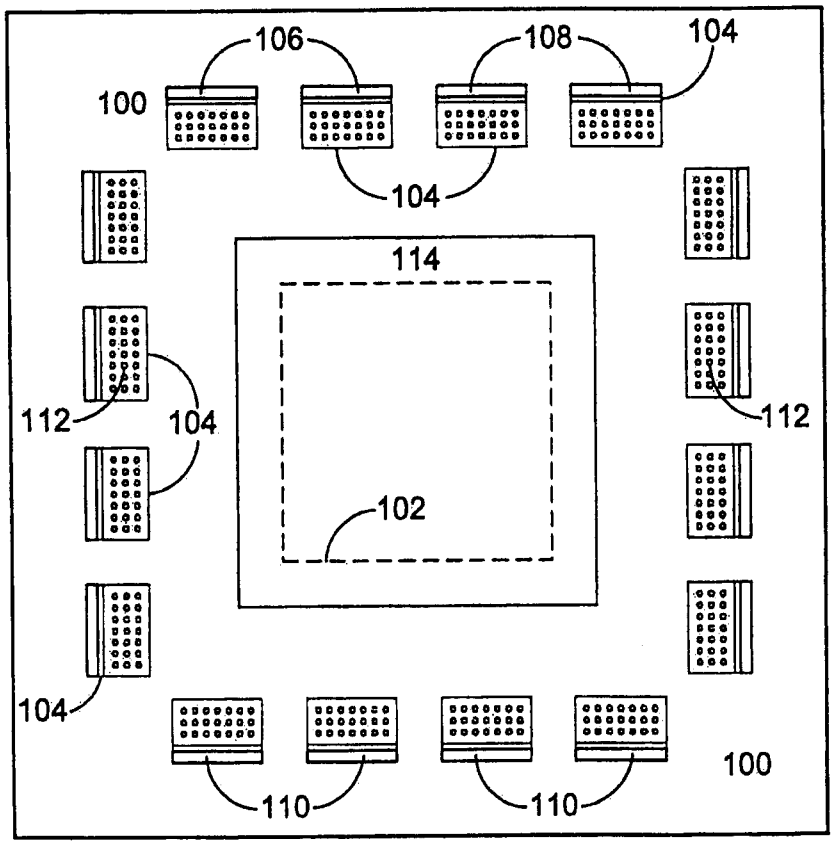


FIG. 1

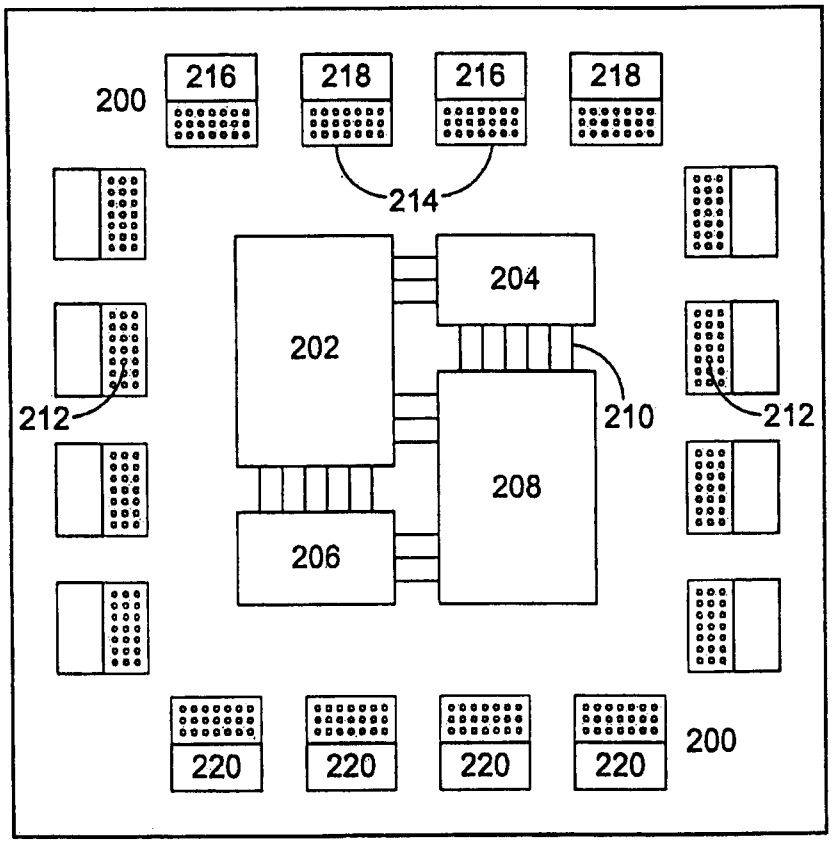

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FIG. 2

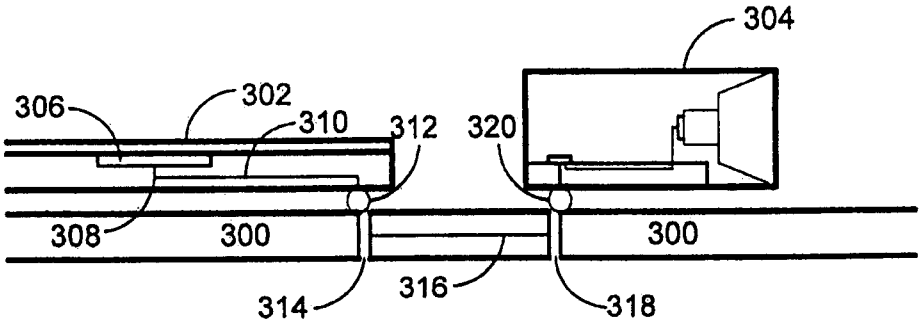


FIG. 3A

PRIOR ART

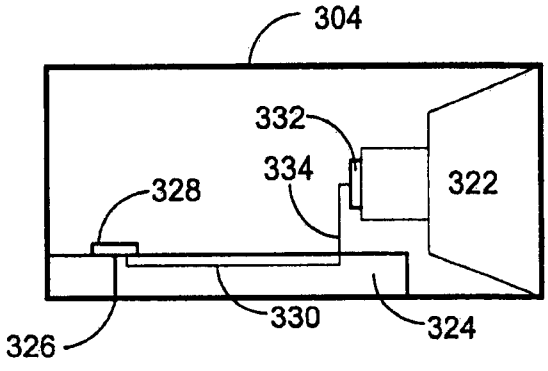


FIG. 3B

PRIOR ART

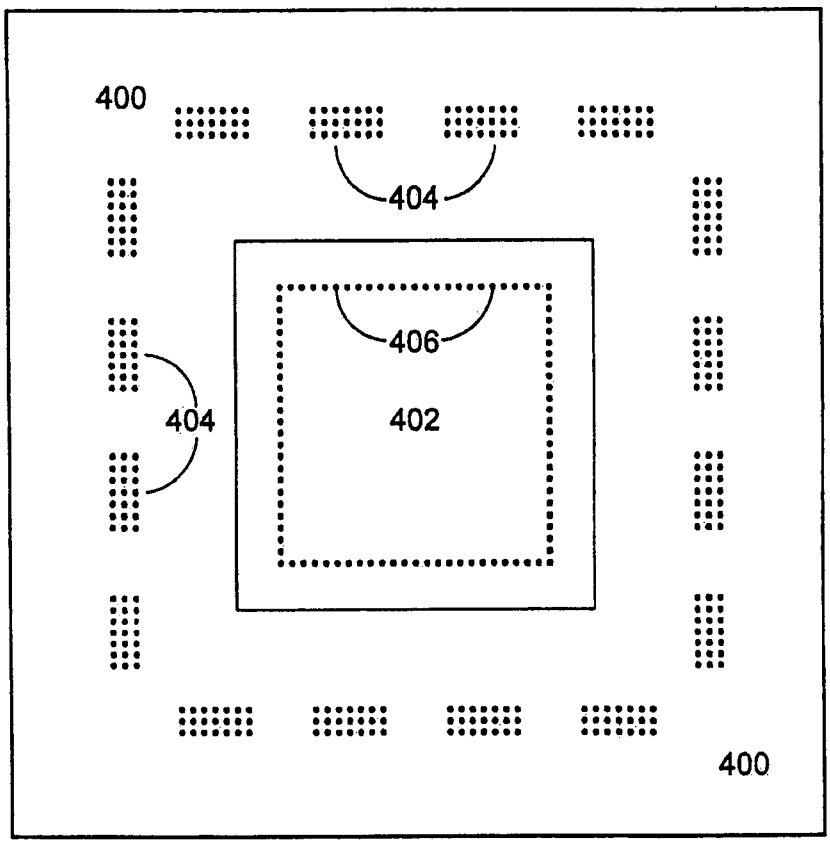


FIG. 4

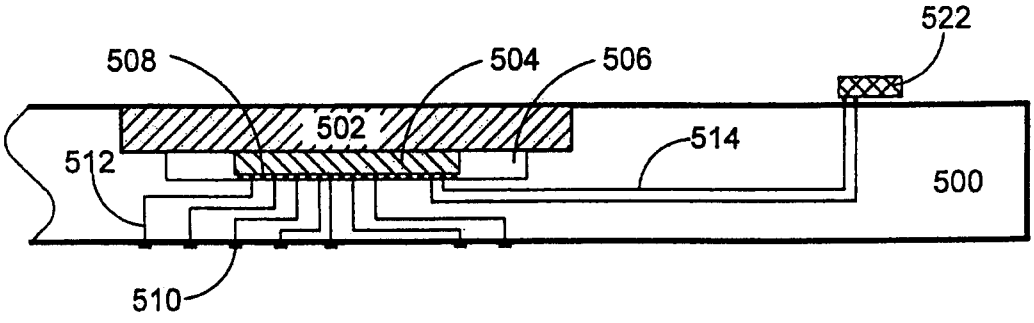

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FIG. 5A

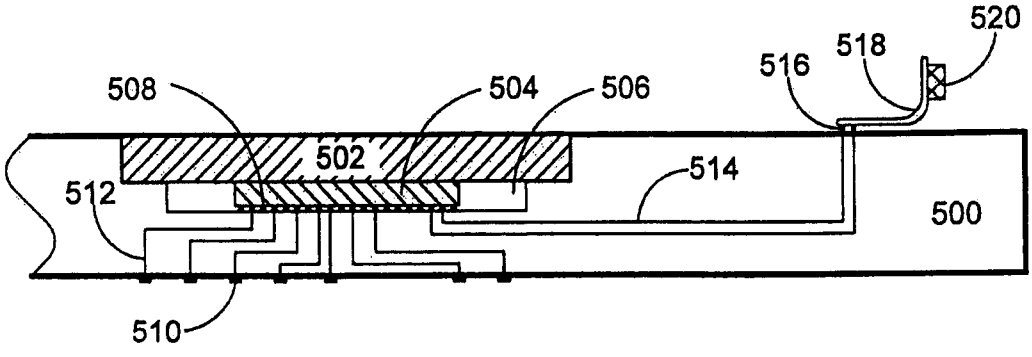

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FIG. 5B

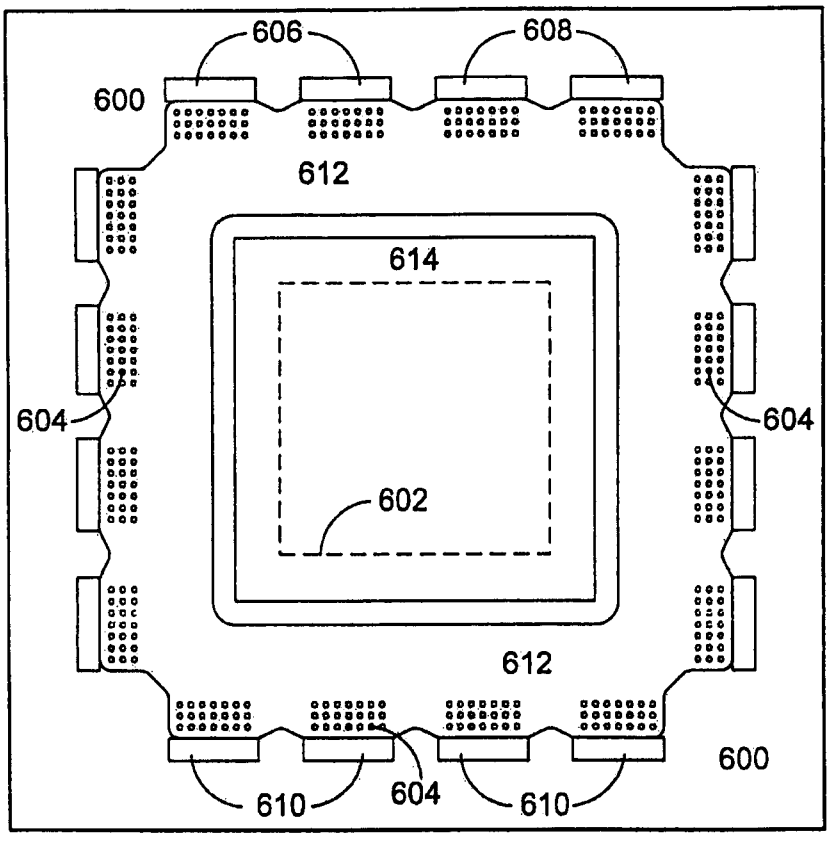


FIG. 6

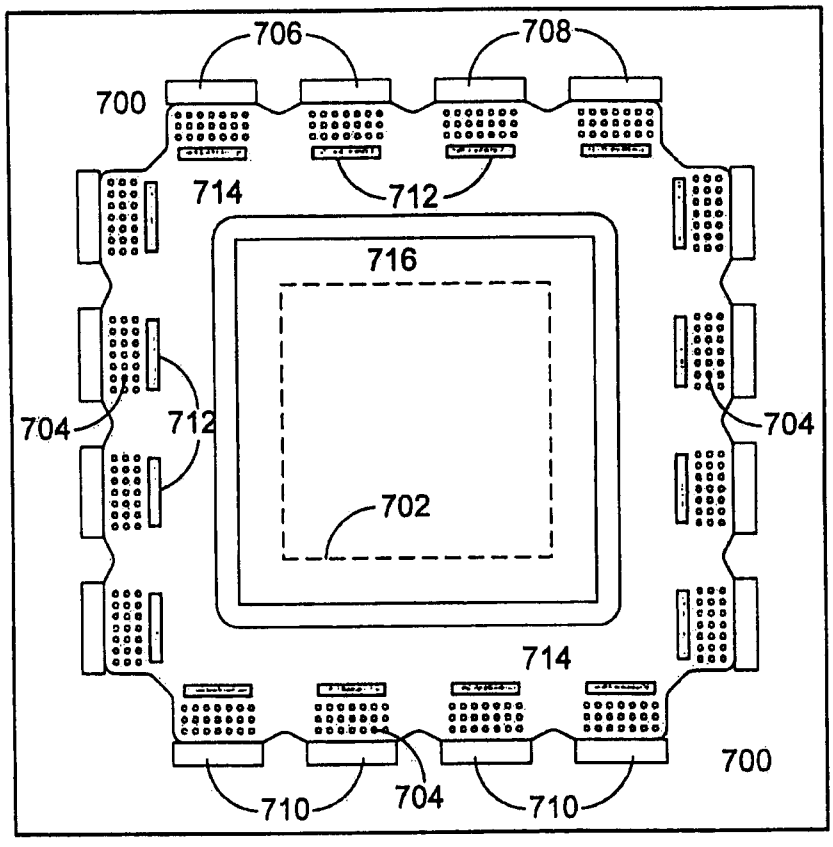


FIG. 7

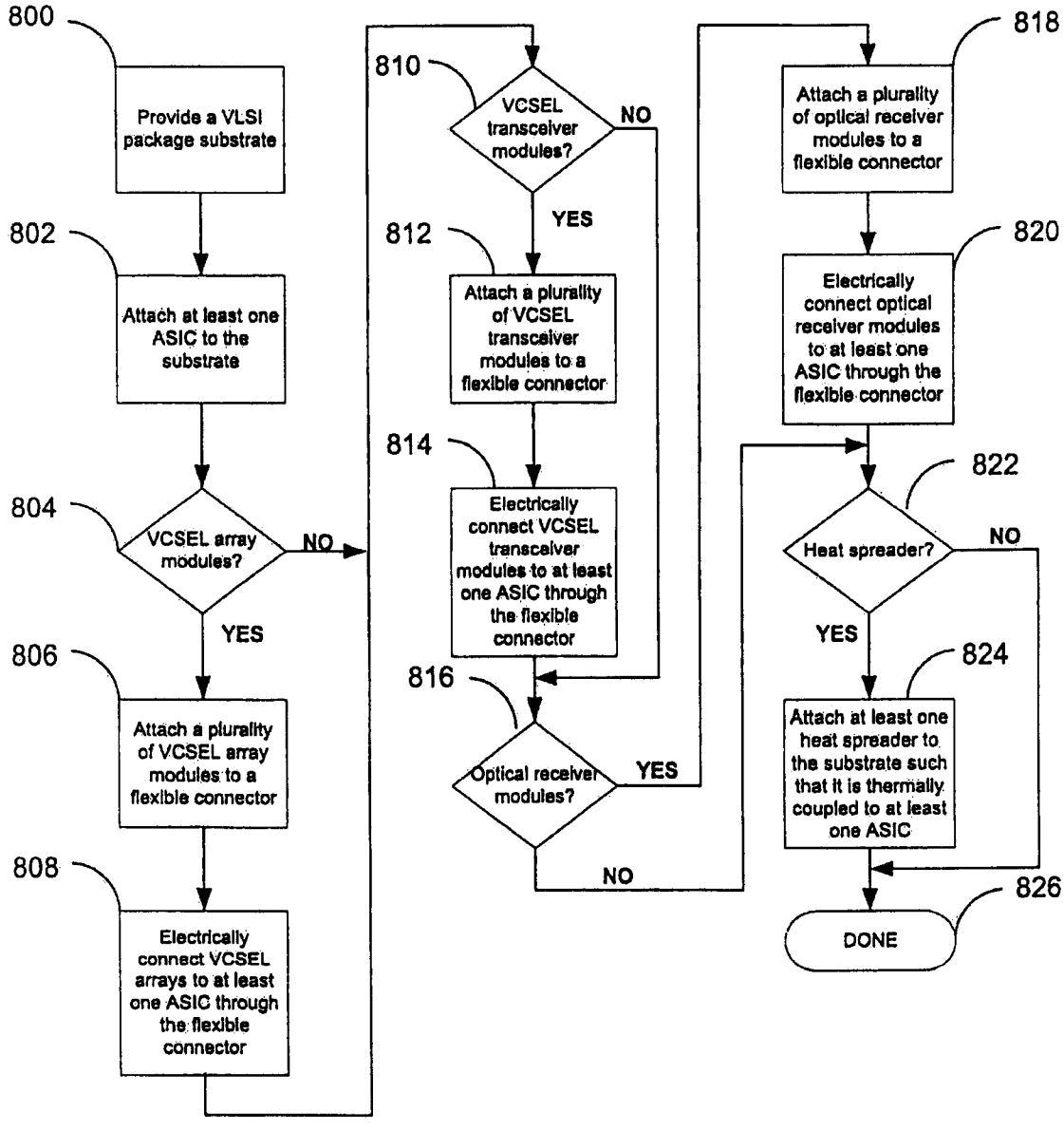

800
Provide a VLSI package substrate
802
Attach at least one ASIC to the substrate
804
VCSEL array modules?
NO
YES
806
Attach a plurality of VCSEL array modules to a flexible connector
808
Electrically connect VCSEL arrays to at least one ASIC through the flexible connector
810
VCSEL transceiver modules?
NO
YES
812
Attach a plurality of VCSEL transceiver modules to a flexible connector
814
Electrically connect VCSEL transceiver modules to at least one ASIC through the flexible connector
816
Optical receiver modules?
YES
NO
818
Attach a plurality of optical receiver modules to a flexible connector
820
Electrically connect optical receiver modules to at least one ASIC through the flexible connector
822
Heat spreader?
NO
YES
824
Attach at least one heat spreader to the substrate such that it is thermally coupled to at least one ASIC
826
DONE

FIG. 8

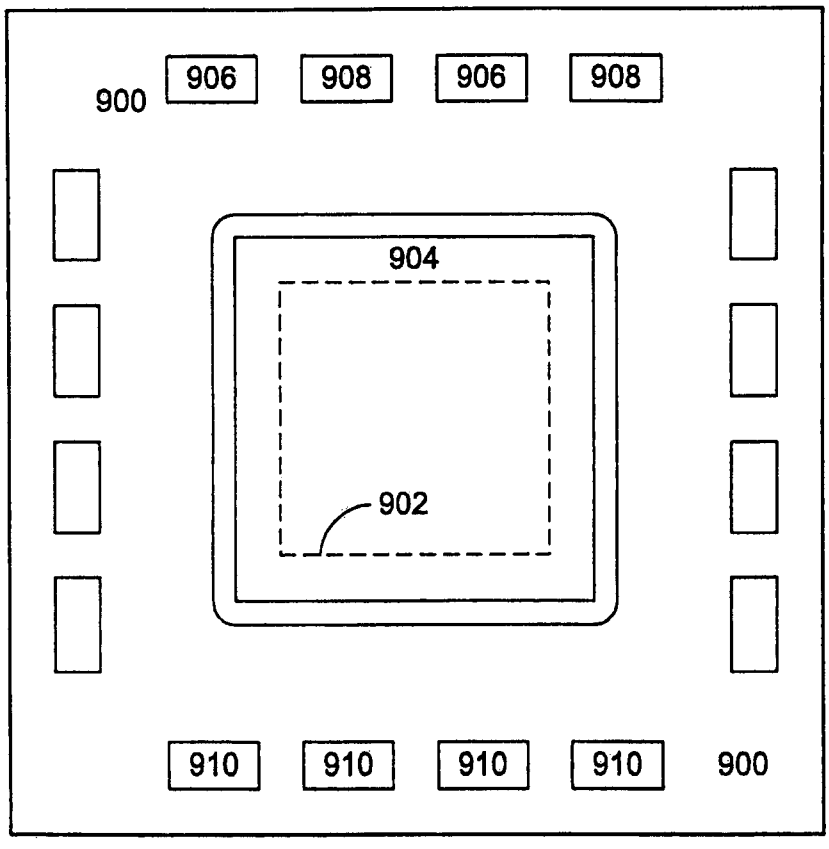


FIG. 9

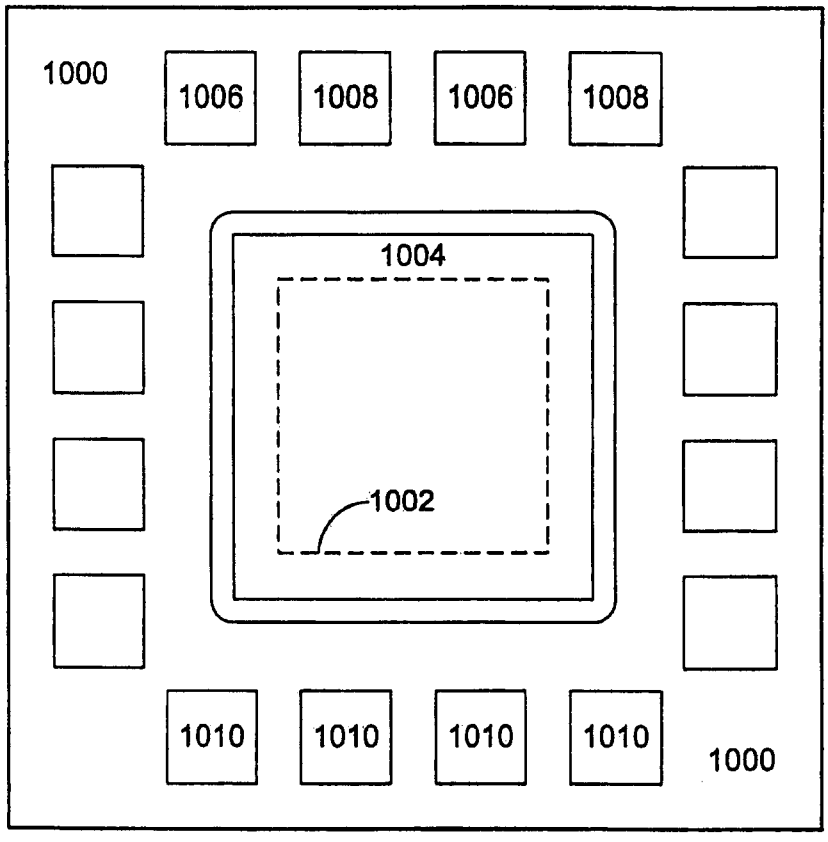


FIG. 10

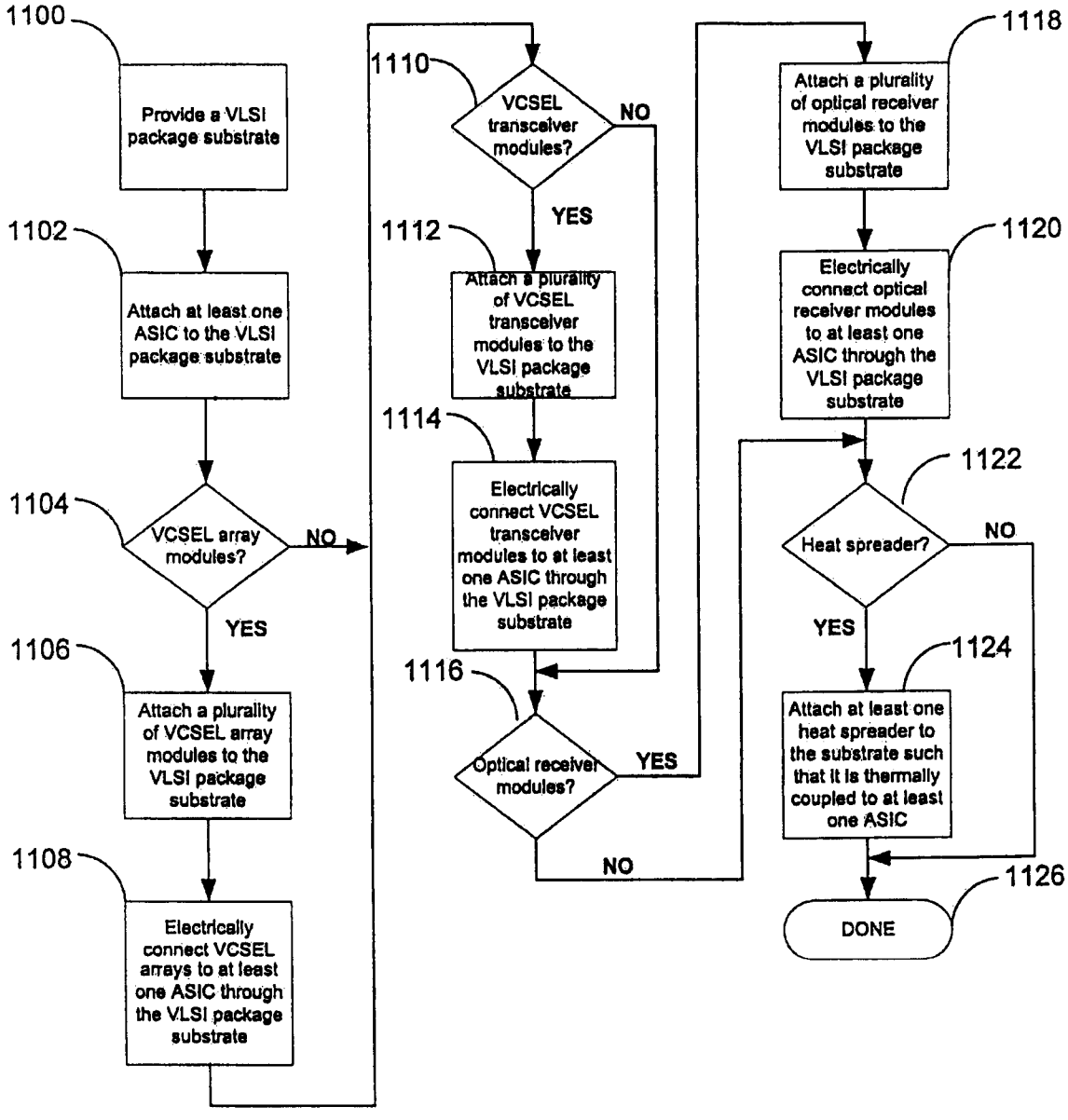

1100
Provide a VLSI package substrate
1102
Attach at least one ASIC to the VLSI package substrate
1104
VCSEL array modules?
NO
YES
1106
Attach a plurality of VCSEL array modules to the VLSI package substrate
1108
Electrically connect VCSEL arrays to at least one ASIC through the VLSI package substrate
1110
VCSEL transceiver modules?
NO
YES
1112
Attach a plurality of VCSEL transceiver modules to the VLSI package substrate
1114
Electrically connect VCSEL transceiver modules to at least one ASIC through the VLSI package substrate
1116
Optical receiver modules?
YES
NO
1118
Attach a plurality of optical receiver modules to the VLSI package substrate
1120
Electrically connect optical receiver modules to at least one ASIC through the VLSI package substrate
1122
Heat spreader?
NO
YES
1124
Attach at least one heat spreader to the substrate such that it is thermally coupled to at least one ASIC
1126
DONE

FIG. 11