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(54) **MEMORY STACK STRUCTURE INCLUDING POWER DISTRIBUTION STRUCTURES AND A HIGH-BANDWIDTH MEMORY INCLUDING THE MEMORY STACK STRUCTURE**

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(57)

ABSTRACT

A memory stack structure includes a base die; a bottom memory die stacked over the base die; an intermediate memory die stacked over the bottom memory die; a top memory die stacked over the intermediate memory die; a signal transmission structure electrically connecting the base die, the bottom memory die, the intermediate memory die, and the top memory die to each other; a first power distribution structure electrically connecting the base die to the bottom memory die; and a second power distribution structure electrically connecting the bottom memory die, the intermediate memory die, and the top memory die to each other.

