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(54) **CIRCUIT BOARD STRUCTURE AND  
MANUFACTURING METHOD THEREOF**

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(71) Applicant: **UNIMICRON TECHNOLOGY  
CORP.**, Taoyuan City (TW)

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(72) Inventor: **Chun Hung KUO**, Taoyuan City (TW)

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(73) Assignee: **UNIMICRON TECHNOLOGY  
CORP.**, Taoyuan City (TW)

(57) **ABSTRACT**

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A circuit board structure includes a build-up structure, a graphene layer disposed on the build-up structure, and at least one conductive pillar disposed on the graphene layer, the graphene layer includes an oxidized area not covered by the at least one conductive pillar and a non-oxidized area covered by the at least one conductive pillar, and the at least one conductive pillar is electrically connected to the build-up structure via the non-oxidized area.

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