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(54) **AUTOMOBILE HEAT DISSIPATION DEVICE  
HAVING MODIFIED SURFACE AND  
SURFACE MODIFICATION AND JOINT  
METHOD FOR AUTOMOBILE HEAT  
DISSIPATION DEVICE**

(52) **U.S. Cl.**

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(71) Applicant: **AMULAIRE THERMAL  
TECHNOLOGY, INC.**, New Taipei  
City (TW)

(57)

**ABSTRACT**

(72) Inventors: **YI-HSIN HUANG**, New Taipei City  
(TW); **CHING-MING YANG**, New  
Taipei City (TW); **TZE-YANG YEH**,  
New Taipei City (TW)

A surface modification and joint method for an automobile heat dissipation device and an automobile heat dissipation device having a modified surface are provided. The surface modification and joint method includes providing a metal heat dissipation device, forming a sputtered metal layer that is patterned on a surface of the metal heat dissipation device by sputtering to form a modification area of the metal heat dissipation device so as to modify the surface of the metal heat dissipation device, and joining a surface of the sputtered metal layer to at least one automobile electronic module by sintering, so that the metal heat dissipation device is thermally coupled to the at least one automobile electronic module.

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