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**DAVID et al.**(10) **Pub. No.: US 2023/0232597 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **SYSTEMS AND METHODS FOR COOLING  
ELECTRONIC COMPONENTS OF A  
VEHICLE**(52) **U.S. Cl.**  
CPC ..... **H05K 7/20872** (2013.01)(71) Applicant: **BorgWarner Luxembourg Automotive  
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**H05K 7/20** (2006.01)(57) **ABSTRACT**

A cooling system for a capacitor may include a housing for the capacitor, the housing comprising of a bottom surface, a top surface, and at least one side surface connecting the bottom surface and the top surface, the housing further including: a bottom inlet manifold and a bottom outlet manifold extending along the bottom surface; an inlet side channel extending along the side surface, the inlet side channel being in fluid communication with the bottom inlet manifold; an outlet side channel extending along the side surface, the outlet side channel being in fluid communication with the bottom outlet manifold; a top inlet manifold extending along the top surface, the top inlet manifold being in fluid communication with the inlet side channel; and a top outlet manifold extending along the top surface, the top outlet manifold being in fluid communication with the outlet side channel.

