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SUZUKI et al.(10) **Pub. No.: US 2023/0232599 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **COOLER AND SEMICONDUCTOR  
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**ABSTRACT**(73) Assignee: **FUJI ELECTRIC CO., LTD.**,  
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A cooler includes a main body extending in the Y direction. The main body includes: (i) an outer wall including an outer surface on which a semiconductor module is to be arranged, and an inner surface; (ii) an inflow path extending in the Y direction, and having an end into which a refrigerant flows; (iii) an outflow path extending in the Y direction, and having an end from which the refrigerant flows out; and (iv) cooling flow paths having the inner surface as a part of a wall surface. The cooling flow paths are arrayed in the Y direction, extend in the X direction, and are positioned between the inflow and outflow paths and the outer wall in the Z direction. Each of the cooling flow paths causes the inflow path and the outflow path to communicate with each other in the X direction.

