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(54) **THERMAL COOLING REGULATION BASED ON POWER PROFILE**

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

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ABSTRACT

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Methods for thermal cooling implemented by a processor of a thermal cooling system may include receiving a power profile input associated with a power consuming unit cooled by a coolant within the thermal cooling system, estimating a peak T_j of the power consuming unit during an upcoming interval based on the power profile input, a coolant temperature regulation point, and a coolant flow rate, and changing at least one of the coolant temperature regulation point or the coolant flow rate in response to the estimated peak T_j varying from a predesignated T_j limit by a predetermined threshold.

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