

一种针对低功耗 MCU 关断模式的功耗优化方法

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摘要: 本文提出了一种更加有效的待机模式功耗优化方案, 一方面进行更加精细的电源控制, 尽可能多的切断待机模式的漏电来源; 另一方面从电路级优化关断模式下的核心模块-电源控制模块, 采用组合逻辑以简化电路, 进一步降低功耗. 后仿真结果显示, 关断模式下的电源控制模块的静态漏电流仅为 18.87 pA, 关断模式总静态电流为 20.8 nA, 并具有较短的状态转换时间.

关键词: 低功耗; MCU; 关断模式

Design and Optimization of the Off Mode of Low-Power MCU

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Abstract: In this paper, we optimize the supply control in off-mode and meanwhile, simplify the circuit of the supply control unit, which is the core module under off-mode, by using combinational logic circuit to reduce power dissipation. The post-layout simulation shows that the leakage current of supply control unit under off-mode is only 18.87 pA, and a relatively short mode switching time is also achieved.

Key words: low-power; MCU; off-mode

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