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(57) Abstract :
The present invention discloses a circuit for enhanced power management in wireless charging systems comprising a transmitter coil (101), receiver coil (102), power management unit (103), adaptive control circuit (104), thermal sensor (105), EMI filter (106), and bidirectional interface (107). The system ensures efficient wireless power transfer through adaptive load regulation, thermal management, EMI suppression, and multi-standard compatibility. It further supports bidirectional power flow, making it suitable for advanced applications such as electric vehicles and renewable energy integration. The invention enhances efficiency, safety, and universal applicability in wireless charging systems.

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