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(57) Abstract :
The present disclosure generally relates to a wireless charging system (100) utilizing a radio frequency (RF) transmitter to generate electromagnetic waves at a specific frequency, which can efficiently charge mobile devices (102). The system (102) comprises a transmitter unit (104) connected to a charging port that emits RF waves, and a receiver unit (110) integrated into the mobile device (102), featuring an antenna and rectifier (114). The antenna captures the RF waves, and the rectifier (114) converts the induced alternating current (AC) into direct current (DC) suitable for charging the device's battery. This wireless charging solution operates effectively within a range of a few feet, allowing users to engage with their devices while charging without the hassle of wires. The system (100) is designed for compatibility with various devices using the same connection port, operates safely at low voltage.

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