

ABSTRACT

A charging system, charging method, and power adapter (1) for a terminal (2). The charging system comprises the power adapter (1) and the terminal (2). The power adapter (1) comprises: a first rectifier unit (101), a switch unit (102),
5 a transformer (103), a second rectifier unit (104), a first charging interface (105), a sampling unit (106), and a control unit (107). The control unit (107) outputs a control signal to the switch unit (102), and adjusts, according to a voltage sample value and/or a current sample value sampled by the sampling unit (106), the duty cycle of the control signal, such that the voltage of a third pulsating
10 waveform outputted by the second rectifier unit (104) meets a charging requirement. The terminal (2) comprises a second charging interface (201) and a battery (202), and the second charging interface (201) is connected to the battery (202). When the second charging interface (201) is connected to the first charging interface (105), the second charging interface (201) applies the voltage
15 of the third pulsating waveform to the battery (202), such that the voltage of the pulsating waveform outputted by the power adapter (1) is directly applied to the battery (202), thereby enabling miniaturization and a low cost of the power adapter (1), and increasing the service life of the battery (202).