Phone Chargers: Working Principle



www.campadelectronics.com.au/mobilecharging.php

They work on a simple principle where AC is converted to DC. There are 3 main components of phone chargers. The three main components are step-down transformer, rectifier (full wave bridge rectifier) and voltage regulator.

Australian Safety Standards

Battery and charger safety is a major issue among all mobile phone users. Instead of buying a cheap and battery, people should buy quality batteries and chargers. Awareness among the people about avoiding counterfeit products is also important. Similarly, all devices should be carefully handled and charged.

There are also situations where genuine products have malfunctioned however, this is extremely rare. in Australia there hasn't been any cases of serious injuries cause by batteries of mobile phones overheating. No records of fire caused by genuine mobile phone chargers are present with the fire authorities.

Counterfeit chargers are a safety hazard to us as well as a hazard to phones. An 'Apple' charger that costs $2 can't be a duplicate of a real Apple charger internally. Such chargers are of very bad quality. The people who manufacture these chargers completely ignore all safety standards. There's a big risk if a charger doesn't have proper insulation. In order to avoid these circumstances, every individual should pay a few more dollars for an Australian safety standards certified charger while connecting it to a smartphone worth several hundred dollars containing a highly volatile lithium battery pack.

Phone Chargers: Different Charger Types

Phone chargers work using an inbuilt switch mode power supply (SMPS). This consist of a high frequency transformer, a full-wave rectifier, a high frequency switch and its control mechanisms as well as filters. Below is a list of the different USB cable types and their uses and applications as well as an overview of different phone chargers that are commonly used in phones, tablets and other devices.

Source: Campad Electronics

References And Resources

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