



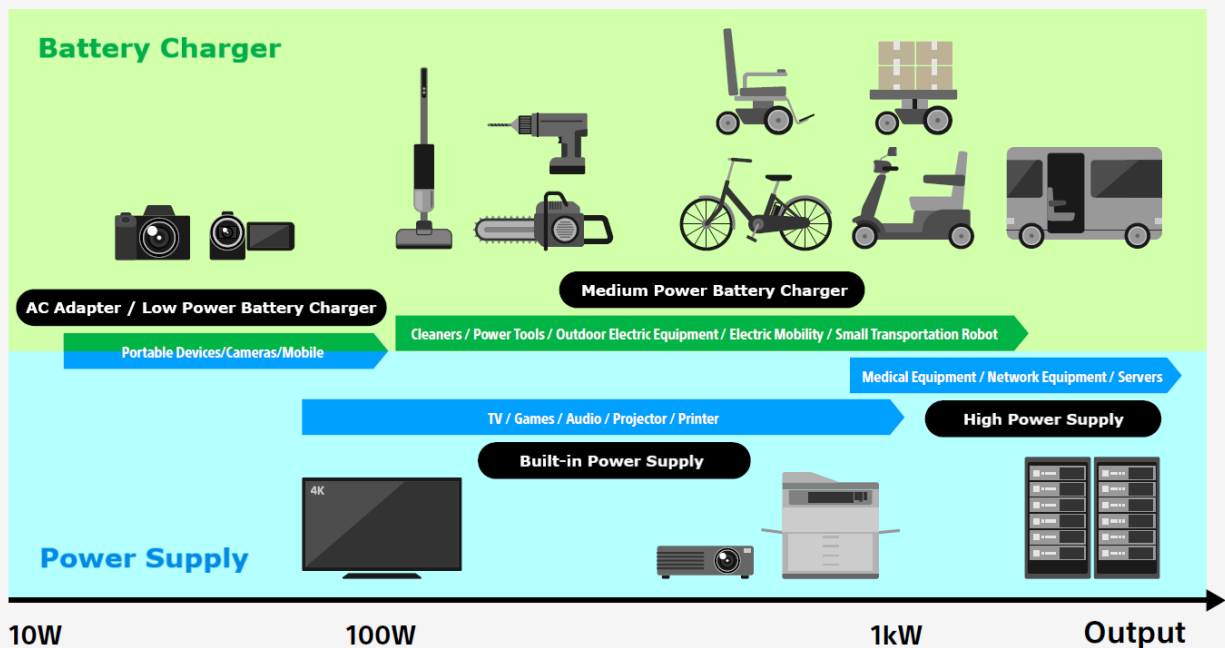
Power Supply and Battery Charger

Sony provides customized power supplies for various applications

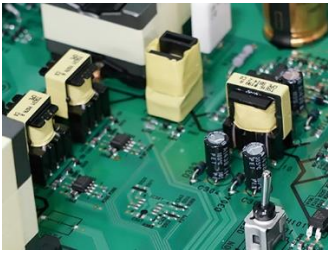
Sony has been engaged in the power supply OEM business (for external customers) since 1985. As a pioneer of “Resonant Technology”, we have been supplying power supplies for the computer and network market. Regarding battery charger business of Lithium-Ion batteries, we have more than 20 years business experience for diversified applications not only for Sony products but also for others such as power tools, electric power-assisted bikes, etc.

Sony Power Supply products provide excellence of quality and reliability to customers based on our valued experience.

Product Portfolio



Sony is leading the power supply industry



Compactness



High Efficiency



Rapid Charge

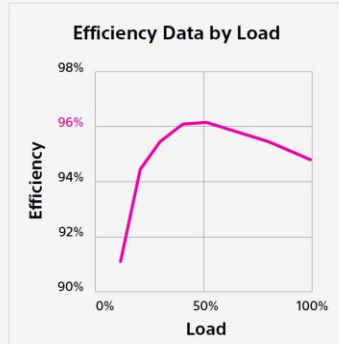


Recycled Plastic

New Developed High Efficiency Power Supply with GaN Device



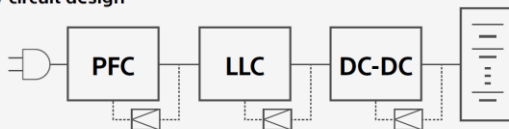
Outline
Input : AC180 - 264V
Output : 12V / 250A
Efficiency : 96% (at half load)
EMI : EN55022 Class A
Interface : PMBus



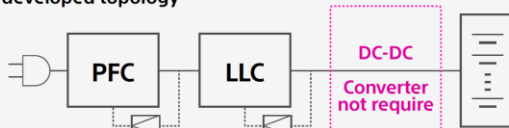
More Compact and Lower Energy Loss

Taking advantage of the experience of developing transformer and surface mount technology on top of circuit technology, we will contribute to smaller and thinner products with the resonant power supplies which are leading the industry in high efficiency and high power density.

Legacy circuit design



Newly developed topology

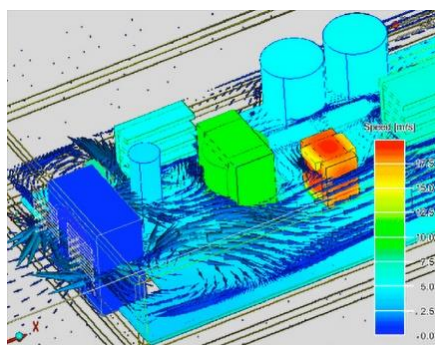


Battery-friendly and Rapid Charging

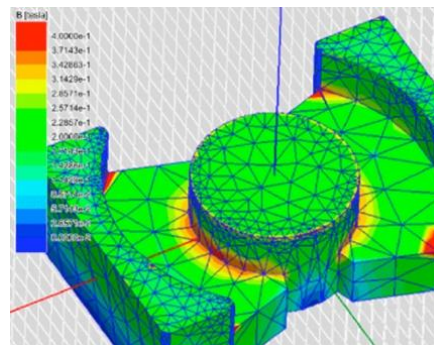
We realize compact designs by optimum charger control in response to battery characteristics. Our new charging circuit was developed for high power batteries, which is a battery-friendly miniaturization technology that only Sony can provide based on in-depth knowledge and rich experience of resonant power supply and Lithium-Ion battery.

Quick and Reliable Design

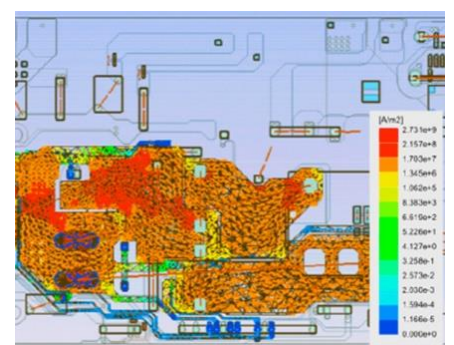
Fully utilizing a wide variety of design simulations in the development process from core technology to mass production design, we can realize to shorten the design lead time as well as provide an optimum design solution through these simulations.



Thermal-fluid simulation



Magnetic simulation



Electro-thermal simulation



Giving new life to old plastics

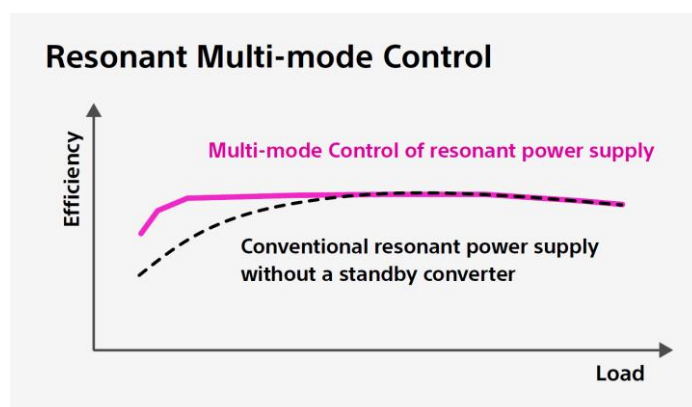
Sony has reduced our use of non-renewable resources by developing a recycled plastic SORPLAS™ is made by blending recycled and waste plastics, such as from optical discs and water bottles, with a Sony-developed flame retardant. We can provide products that offers both sustainability and high performance.

Quick and Reliable Design

Resonant Technology is suitable to handle mid/high power over 100W. It is formally called “full wave current resonant” or sometimes “Resonant LLC” and it excels in compactness, high efficiency and low noise. This technology has been getting popular along with the prevalence of LCD TV since about 2000 and now is widely used in diversified applications.

It was in 1981, 25 years earlier than becoming popular in the market, that Sony started the mass production of power supplies utilizing resonant technology. Ahead of the industry, we valued and studied the characteristics of resonant technology from its very early stages and have kept improving the technology in response to market needs in a variety of applications both for Sony and for other customers. In 2015, Sony released a new multi-mode control IC which enables us to meet energy saving regulations without a standby converter (using only a main converter).

In order to meet our customer’s various needs, we also provide other technologies such as fly-back, quasi resonant, phase-shift.



1981	Mass Production Start of resonant power supply
1989	Developed MHz Resonant Power Supply
1993	Developed resonant power supply of self-excited saturated transistor Developed control IC of separately excited current resonant
2007	Developed the world’s first PFC + current resonant control IC
2015	Developed multi-mode resonant control IC