

Non - Contact Power Transmission Module

The S4E96400/S4E96401 is a general-purpose module capable of transmitting maximum 2.5W power (secondary output 5.0V, 500mA).
 With a thickness of 0.8 mm, the coil unit is configured separately from the circuit-board module (transmission and safety circuits). This allows the module to be incorporated easily into thin devices.

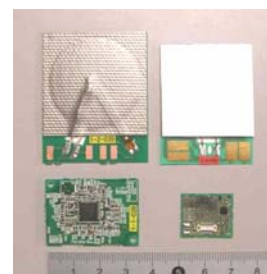
■ FEATURES

- Transmission capability
 With the maximum approx. 70% (input versus output efficiency) of transmitting efficiency, output power of 2.5 W (5.0V, 500mA) is achieved in the secondary side.
- Compact and thin module
 Secondary coil unit: size 45 × 35 × 0.8mm
 Secondary circuit-board module: size 20 × 15 × 1.6mm
- Enhanced safety features
 Secondary recognition, detection of metal, over-current/temperature detection, shielding sheet (back side)
- Necessary function for battery charging is installed
 Charging system is automatically stopped when the battery is fully charged or when the device is removed.

■ SPECIFICATIONS (S4E16400/S4E16401)

Item	Specifications (temporary)
Primary input voltage	5.4V
Secondary output power	2.5W (5.0V, 500mA)
Recommended transmission distance	(Vertical direction) 3.8 ± 0.5mm
	(Horizontal direction) ± 5.0mm
Primary side dimensions	(Coil-part) 55 × 40 × 2.2mm
	(Circuit-board-part) 40 × 30 × 5.3mm
Secondary side dimensions	(Coil-part) 45 × 35 × 0.8mm
	(Circuit-board-part) 20 × 15 × 1.6mm
Operating temperature range	-10°C to + 45°C
Start of transmission	Auto-start

S4E96400 Primary side S4E96401 Secondary side

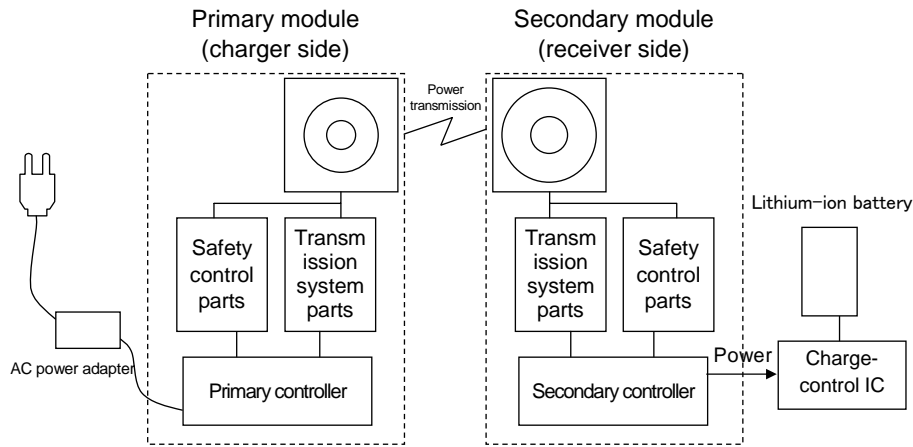


■ APPLICATION

- Battery charger for mobile phones, mobile AV equipment, toys, industrial-use hand held terminals, portable measuring instruments, bathroom equipment, etc.

S4E96400/S4E96401 (2.5W OUTPUT PRODUCTS)

SYSTEM CONFIGURATION EXAMPLE



HANDLING CAUTIONS

- If you use an outer case, etc., built largely out of a metal material, place its metal parts away from the coil area.
- If any metal is placed close to the transmission surface of the primary side while the unit is transmitting power, the unit's function to detect a metal works, and the unit's power transmission stops. The function may fail to work, however, depending on the type, size, or conditions of the location the unit is mounted at, leading to eddy-current heating of the metal due to flux linkage. Therefore, please carry out a full verification and develop a structure to prevent the intrusion of foreign objects when you integrate the unit into your product. Also, we recommend that you add text containing the following main message to the operation manual of your product that has the unit integrated into it as well as the product itself:
"To prevent heat from being generated, do not place metals such as coins or clips on the battery charger, including when the battery is being charged."
"Use the specified AC adapter for a power source of the battery charger. Do not use any other equipment as a power supply."
- Each module has a part such as a coil terminal where wiring is exposed. Take extra care to prevent short-circuiting of other parts and leaks when you handle the unit.

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