



深圳市博运达电子有限公司

SHENZHEN POWERWONDER ELECTRONICS CO.,LTD

AD1869 Compatible with Apple & Samsung Watch Wireless Charging

Customer Name:

Product Name: Wireless Charger Compatible with Apple and

Samsung Watches

Product model AD1869

Huizhou Hongrongxin Technology Co., LTD

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DATA SHEET

AD1869 Compatible with Apple & Samsung Watch Wireless Charging

AD1869 兼容苹果与三星手表无线充

规格书

Specification

目录

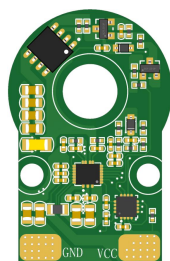
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一、Product Introduction

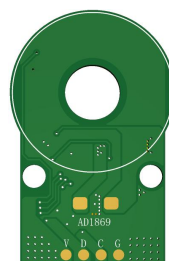
This module is a transmitter module specially designed to meet the magnetic wireless receiving requirements of Apple and Samsung watches. It features stable performance and low standby power consumption. Adopting a unique PWM modulation mode, it greatly improves conversion efficiency, bringing convenience of wireless charging. The module delivers high output efficiency. Built in comparison circuit for transmitted power and wireless received power enables accurate control of transmitted energy loss. With fewer components and high cost performance, it can stably charge Apple watch series.

- - DC 5V for power input
- Max. output power: 2.5W
- Supports magnetic wireless charging for Apple and Samsung watches

二、PCBA Pictures and Description



BJX-02-2715-V1.0 TOP 面



BJX-02-2715-V1.0 Bottom 面

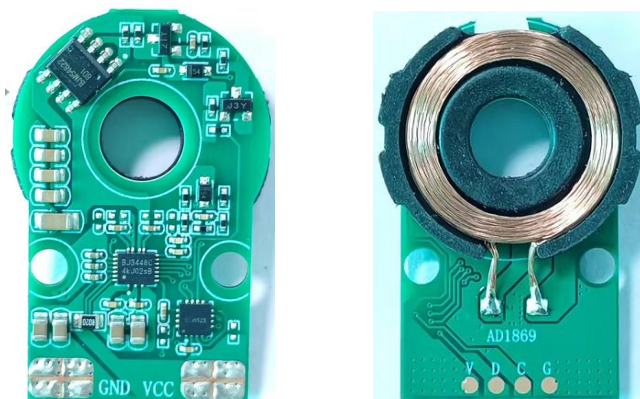
PCBA: BJX 02 2715 V1.0 (2025.07.30) 24.00mm*37.00mm*1.0mm, green solder mask with white silkscreen, covered vias, 2 layer FR 4 board, OSP surface finish. Samples and mass production boards adopt green solder mask with white silkscreen, lead free environmental hot air solder leveling.

三、Coil and Magnet Parameter Description

- 3.1 Magnet Dimension: $\Phi 5\text{mm} \times 2\text{mm}$ (magnets with higher magnetic force are optional)
- 3.2 Magnet Magnetic Flux Density: $3500\text{GS} \pm 150$
- 3.3 Coil lead length: $5.5\text{mm} \pm 0.5\text{mm}$ (including tinned part). Doublesided adhesive sticker on rear side (without EVA foam), $\Phi 19\text{mm}$, central through hole $\Phi 8\text{mm}$.



四、Physical Pictures



五、Specification Parameters

5.1、Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage Range	Vin	-0.5~+5.5	V
Recommended Operating Ambient Temperature	TA	0~33 0~28	℃
Storage Temperature Range	Tstg	-20~85	℃
Storage Humidity Range	Tstr	<95%	RH
Operating Current	I _{max}	1	A

5.2Electrical Parameters for Application Solution

Item	Parameter
Operating Voltage	4.75V~5.25V
Output Power	2.5W (MAX)
Wireless Distance (Gap between transmitter coil and receiver coil)	0.6-1.1mm (max)
Coil Type	Soft magnetic Coil
Conversion Efficiency	80% (depends on coupling matching of receiver)
Ripple Voltage	<50mV
Protection Functions	Over current protection, Over voltage protection, Over temperature protection (optional)
Instantaneous Voltage (Withstand Voltage)	12V
Indicator Function	/
Compatibility	Compatible with Apple and Samsung watch products

六、Notes

6. 1 Scheme 1968K is optimized primarily for Apple watches, with Samsung watches as secondary support target.
6. 2 When ambient temperature exceeds 28℃, the 1968K module may have abnormal charging performance for Samsung watches, such as failure to charge, power drop after reaching certain battery level, or hightemperature alarm on watch .
6. 3 For production assembly, it is recommended to install PCBA module 1968K + coil into charger bottom housing first, then insert magnet into central hole of coil. This assembly sequence helps avoid magnet missing risk caused by pre installed magnet before soldering.
6. 4 Widely applied in multi in one wireless chargers, multi output charging cables, standalone retail chargers, power banks and other products.
6. 5 If you intend to apply this product to markets or product types other than those specified above, please consult us in advance to verify solution suitability and avoid potential risks.
6. 6 Important Reminders:
 - A. Pre technical evaluation is required for applications beyond specified scope (other markets / product types / non standard power supply) to prevent unknown risks.
 - B. Power supply with input voltage higher than specified range may burn internal components, charger housing or watch housing.
 - C. We shall not be liable for any malfunctions or damages caused by non standard power supply or abnormal application scenarios without prior written notification.