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# 1、功能说明 Function description

- ◆本产品三合一功能 旅充+移动电源+无线充电；

This product has three functions: travel charging + mobile power supply + wireless charging;

- ◆适用于苹果手机、平板电脑、安卓手机等 USB 用电设备；

Suitable for USB devices such as apple phones, tablets and android phones;

- ◆Type-C 输入 PD18W，输出 PD20W；单使用 Type-C 输出 PD20W，当 USB1/2 或者无线充一起使用时转为 5V 模式最大功率 5V/3A；

Type-C input PD18W and output PD20W ;Single-use Type-C output PD20W and convert to 5V mode with maximum power of 5V/3A when USB1/2 or wireless charging is used together;

- ◆Type-C PD 口输出：支持协议 PD2.0, PD3.0, QC2.0, QC3.0, AFC, FCP, SFCP, PPS

Type-C PD: support protocol PD2.0, PD3.0, QC2.0, QC3.0, AFC, FCP, SFCP, PPS

- ◆USB1 支持协议 QC2.0, QC3.0, FCP, SFCP, SCP, VOOC, 5V/3.6A 9V/2A(18W)

USB1 support protocol QC2.0, QC3.0, FCP, SFCP, SCP, VOOC, 5V/3.6A 9V/2A(18W)

- ◆USB2 输出：支持协议 QC2.0, QC3.0, AFC, FCP, SFCP, 输出 5V/2.4A、9V/2A。(18W)

USB2 output: support protocol QC2.0, QC3.0, AFC, FCP, SFCP, output:5V/2.4A, 9V/2A. 18W

- ◆Qi无线输出功率：5W/7.5W/10W/15W

Qi-Wireless Output 5W/7.5W/10W/15W. The wireless charging function can only be realized when charging with an adapter.

- ◆三星私有协议 10W 、苹果定频 7.5W，无线充电器发射，确保手机内置 Qi 无线接收功能或加装无线接收；

Samsung's private protocol is 10W, Apple's subscription is 7.5W, and the wireless charger is launched to ensure that the device is equipped with Qi wireless reception function or wireless reception

- ◆Qi 指示灯：Qi 充电蓝灯亮，待机绿灯亮；

Qi wireless charging indicator: the blue light of Qi wireless charging and the green light of standby turn on;

- ◆电量显示：显示电量从 0~100；

Electric quantity display: display electric quantity from 0 to 100;

- ◆电源按键：单按开机显示电量，长按关机，空载 30 秒后自动关机；

Power button: single press to start the power, long press to shut down, and automatically shut down after no load for 30 seconds;

- ◆交流输入插头：可更换各国插头

AC plug: the plug can be changed in different countries

◆旅充模式 5V/3A，充电时间约 3 个小时；

Travel charge mode 5V/3A, charging time 3 hours;

◆支持边充边放：部分电流对手机充电部分电流，部分电流对本电源充电，智能分流。

Support charging and discharging: part of the current is charged to the mobile phone, part of the current is charged to the power supply, intelligent shunting.

## 2、产品图片 Product picture



### 3、性能参数 Performance parameter

#### 3.1 电气性能 Electrical Performance

##### 3.1.1 输入特性 Input characteristics

名称 Designation	参数 Parameter	备注 Remarks
AC 输入电压 AC input voltage	AC 100-240V $\pm$ 5%	
AC 输入电流: AC input current:	0.5A (MAX)	
Type-C 输入: Type-C input	4.80~5.10V/3.0A 15W (MAX) 8.75~9.10V/2.0A PD18W (MAX) 11.75~12.30V/1.5A PD18W (MAX)	测试 PD18W 的输入输出, 测试线必须达到 3A 以上, 带线补偿 0.3V 充电器 Test the input and output of PD18W, the test line must be above 3A, with line compensation 0.3v charger
电池容量: Battery capacity	10000mAh $\pm$ 5% 3.63V 最小容量 9500mAh 21700~5000*2	分容标准: 拆下电芯用分容仪, 按电芯规格书 0.2C 放电至 2.5V
输入频率范围: Input frequency range:	47~63HZ	
输入空载功耗: Input No-load power consumption:	0.2W (MAX)	

### 3.1.2 移动电源模式输出特性 Output characteristics

输出接口 Output interface	输出电压 (V) Output voltage	带载电流 (A) Load current			规定误差 (%) Regulation of error		输出功率 (W) Output power	备注
		MIN	STANDARD	MAX	空载 No-load	带载 On load		
Type-C PD	4.75-5.10	2.30	2.40	3.00	±5%	±5%	12	支持协议： PD2.0, PD3.0, QC2.0, QC3.0, AFC, FCP, SFCP , PPS
	8.90-9.30	1.80	2.22	2.23	±5%	±5%	20	
	11.75-12.3	1.65	1.67	1.68	±5%	±5%	20	
USB2	4.80-5.20	2.20	2.40	2.50	±5%	±5%	12	支持协议： QC2.0, QC3.0, FCP, SFCP, SCP , VOOC
	8.80-9.30	1.80	1.90	2.00	±5%	±5%	18	
	11.75-12.3	1.45	1.50	1.52	±5%	±5%	18	
USB1	4.75-5.10	2.8A	3	3.6	±5%	±5%	18	支持协议： QC2.0, QC3.0, AFC, FCP, SFCP
	8.90-9.30	1.8A	2	2.2	±5%	±5%	18	
	11.75-12.3	1.45	1.50	1.52	±5%	±5%	18	
Type-C PD USB 1/2	5	3	3	3.6	±5%	±5%	18	组合总输出功率

### 3.1.3 AC 充电器模式

输出电压 (V) Output voltage	带载电流 (A) Load current	规定误差 (%) Regulation of error	输出功率 (W) Output	备注
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	MIN	STANDARD	MAX	空载 No-load	带载 On load	power	
Type-C: 4.80~5.15V	2.5	3.0	3.0	±5%	±5%	15	
USB1: 4.75~5.15V	2.5	3.0	3.0	±5%	±5%	15	
USB2: 4.75~5.15V	2.5	3.0	3.0	±5%	±5%	15	
QI (wireless charge): 4.80~5.05V	0.8	1.0	1.1	±5%	±5%	5	
Type-C USB1/2 QI	2.8	3.0	3.1	±5%	±5%	15	组合总输出功率

### 3.1.4 产品特点及保护功能 Product features and protection functions

名称 Designation	最小 Min	典型 Typ	最大 Max	说明 Description
转换效率 Converting efficiency	65%	85%	90%	分别在 100%、75%、25%负载下测试 The test under 100%, 75%, 25% Load.
开路保护 Open circuit protection	-	-	-	当输出负载开路时电源不会损坏 The power supply will not be damaged when the output load is open.
短路保护 Short-circuit protection	-	-	-	当输出正负极短路时电源不会损坏 The power supply will not be damaged when the output positive and negative short circuits.
过压保护 Over-voltage protection	-	-	-	当因故障引起输出电压过高时电源将保护, 不会损坏输出用电设备 The power supply will protect the output electrical equipment when the output voltage is too high due to fault.

无线充电转换效率 Wireless charging efficiency	68%	70%	78%	使用 EC3016 接收带载 10W 测试, 测试距离发射与接收线圈之间 6mm 以内距离 Use EC3016 to receive the test with a load of 10W, test distance within 6mm of transmitter and receiver coil.
输出过流保护 Output over-current protection	3.1A	3.2A	3.3A	Type-C、USB-A 和无线充并联输出 Output of Type-C、USB-A and wireless charging in parallel.
FOD 保护 FOD protection	-	-	-	金属放置发射圈引起异物保护 Metal placement of the launcher causes foreign body protection.
输出软启动 Output soft protection	5mS	10mS	15mS	输出电压由低到高的上升时间,可以减少对用电设备的冲击,起到保护用电设备的作用 The rising time of output voltage from low to high can reduce the impact on the electrical equipment and protect the electrical equipment.



### 3.2 安全及可靠性 Safety and reliability

参数项目 Parameter items	条件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit	备注 Remarks
安全标准 Standard of security	-	-	-	-	-	-
导线摇摆测试 Traverse swing test	-	-	-	-	-	-
耐压（初级和次级间） Voltage resistance (primary and secondary)	电流限制：5mA	-	3000	3500	Vac/ 分	电压上升时间 0.5-2.0S
漏电流 Leak current	-	-	-	0.25	mA	240V 输入
绝缘阻抗（初级和次级间） Insulation resistance(primary and secondary)	DC500V	50	-	-	MΩ	输入到输出 Input to output
负载外壳温度 Load enclosure temperature	额定输入电压 Rated input voltage	-	-	75	°C	环境温度 25°C, 满载 Ambient temperature 25°C ,Full load
空载外壳温度上升 No load shell temperature rises	额定输入电压 Rated input voltage	-	-	15	°C	空载 No load
可靠性 Reliability	MTBF	10000	-	-	Hour	正常条件下使用 Used under normal conditions

### 3.3 环境特性 Environmental characteristics

参数项目 Parameter items	条件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit	备注 Remarks
温度 Temperature	运行温度 Running temperature	45	55	80	°C	
	储藏温度 Storage temperature	-20	-	80	°C	
湿度 Humidity	运行湿度 Running humidity	20	-	80	%	不结露 No condensation
	储藏湿度 Storage humidity	5	-	95	%	

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(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.