



深圳斯百特电子有限公司

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Product Specification

Pages :

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# Product Specification

## PD 87W USB Type-C Charger

Customer Name:

Customer P/N:

Customer Spec.:

Product Code: **3601000304**

Product Model: **STK-CPD87W-F145-1C-XR**

Product Name: **USB Type-C Charger**

**DRAFT :**

**CHECKED :**

**APPROVED :**

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# Specification Revision History

Rev.	Description	Issue Date
A	Specification Issue	2018-05-11
B		
C		
D		

# Electrical Specification

## Electrical Requirements

### 1. Input Characteristics:

ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage		100-240Vac
1.2 Input Voltage Range		90Vac to 264Vac
1.3 Input Frequency Range		47-63Hz
1.4 Input Current	100Vac 47Hz / Full load	≤ 1.5A
1.5 Efficiency: (Warm up 10minutes later)	Input:100-240Vac50Hz  Output Load: 25%,50%,75%,100% load	Average efficiency:  ≥87%
1.6 No Load Power Consumption	240Vac50Hz / 0A load	≤0.5W

### 2. Output Characteristics:

ITEM	CONDITION	SPECIFICATION
2.1 Output Rated Voltage		5V / 9V / 15V / 20V DC
2.2 Output Current	at constant voltage mode	5V3A / 9V3A / 15V3A / 20V4.35A
2.3 Output Voltage Setting	Test the output voltage at the USB port	Output 5V: 5V±8% Output 9V: 9V±8% Output 15V: 15V±8% Output 20V: 20V±8%
2.4 Output Voltage Ripple and Noise: (0.1uF Ceramic Cap. and 50V 10uF Aluminum Cap. Paralleled between the end of output cable)	5VDC, Full load 9VDC, Full load 15VDC, Full load 20VDC, Full load	≤100mVp-p ≤100mVp-p ≤200mVp-p ≤200mVp-p
2.5 Output Overshoot Voltage	Input:240Vac Output:5VDC at 0A/3A	≤ 6V
2.6 Turn-On Delay Time:	At input 240Vac / full load, output voltage shall remain regulation	≤3Sec.
2.7 Hold Up Time:	At input 240Vac / full load, output voltage shall remain regulation	≥5mS
2.8 Rise Time:	At input 240Vac / full load, DC output rise time from 5% to 95% of Vo	≤2S

<b>3. Protection Characteristics:</b>		
<b>ITEM</b>	<b>CONDITION</b>	<b>SPECIFICATION</b>
3.1 Short Circuit Protection:	The charger can withstand continuous short at DC output and no damage.	Auto-Recovery, reset $\leq$ 2 Minutes.
3.2 Over Current Protection	The protection current will be: 5/9/15 VDC : OCP $\leq$ 4.5A 20VDC : OCP $\leq$ 6A	Auto-Recovery, reset $\leq$ 1 sec.
3.3 Over Voltage Protection	Output 20V DC at full load	$\leq$ 24V Auto-Recovery after 30 Minutes
<b>4. Environmental Characteristics:</b>		
<b>ITEM</b>	<b>CONDITION</b>	<b>SPECIFICATION</b>
4.1 Electric Fast Transients : Refer to IEC1000- 4-4 level 3	Impulse: $\pm$ 1kV applied to L, N and chassis, pulse duration 50nS period 5 minutes. Input voltage 230Vac and full load.	No function error.(criterion A)
4.2 Lightning Surge: Refer to IEC1000-4-5 level 3	$\pm$ 1kV applied between L and N, $\pm$ 2kV applied between L,N and FG, Pulse rise time 1.2us and duty time 50uS, 10 times test each one.	No function error.(criterion A)
4.4 Electron Static Discharge: (Refer to IEC1000-4-2 Energy Storage Capacitor 150pF; Discharge Resistor 330 $\Omega$ )	Air Discharge: $\pm$ 8KV min. Contact Discharge: $\pm$ 4KV min.	No function error. (criterion A) No function error. (criterion A)
4.5 Cooling	Natural air cooling	
4.6 EMI: Adapter comply with the following national standards: EMI Conducted Emission EMI Radiated Emission	FCC. DOCKET 20780. PART 15J. CLASS B CISPR22 : 1993/EN55022(1994):CLASS B VCCI CLASS II	Under 3db.
4.7 Safety conforming:		FCC/CE/ROHS.
4.8 Leakage Current	240Vac / 50Hz	<60uA
4.9 Life time:	240Vac / full load / 25°C	$\geq$ 20,000Hours.
4.10 Insulation Resistance:	Between AC input and secondary applied 500Vdc for 1 minute.	100M $\Omega$
4.11 Dielectric Strength: (Hi-Pot)	Between AC input and secondary AC 3KV, test time 1 minute, and cut off current shall be less than 10mA.  AC 3kV, test time 1 sec. In production line	

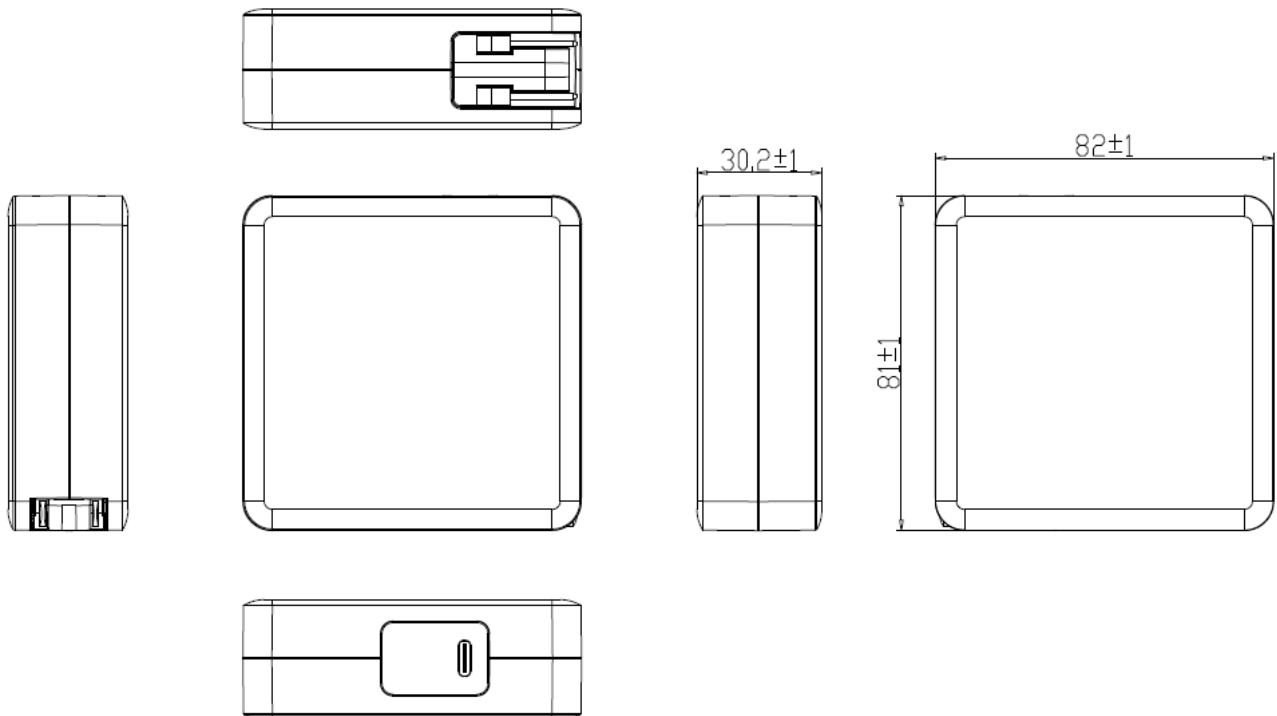
4.12 Temperature	Operating Temperature: Storage Temperature:	0 to 40°C -20 to +80°C
4.13 Humidity:	Operating Humidity: Storage Humidity:	10% ~ 80% 5% ~ 95%

**5. Mechanical Characteristics:**

ITEM	CONDITION	SPECIFICATION
5.1 Dimension (Length x Width x Height)		82 x 81 x 30.2 mm
5.2 Adapter weight Case material		TBD
5.3 Input terminal		2Pins Plug for US standard
5.4 Output Port Type		USB Type-C
5.5 Color Case		White

**6. Case Drawing:**

ITEM	CONDITION	SPECIFICATION
6.1 Case Model:	/	F145
6.2 Case Dimension:	Length x Width x Height	82 x 81 x 30.2 mm



**7. Input Cable Drawing:**

ITEM	CONDITION	SPECIFICATION
7.1 Cable Length		
7.2 Cable Terminal Type		

No Input Cable

**8. Output Cable Drawing:**

ITEM	CONDITION	SPECIFICATION
8.1 Cable Length		
8.2 Cable Terminal Type		

No Output Cable