

SPECIFICATION FOR APPROVAL

CUSTOMER:	平台
CUSTOMER P.N.:	
MODEL NO.:	P40-Z5000R200-100H0-E
PRODUCT NO.:	SDXXX-E0
SAMPLE DATE:	2025-02-13

CUSTOMER AUTHORIZED SIGNATURE

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Please return to us one copy of "SPECIFICATION FOR APPROVAL"
with you approved signature.

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MANUFACTURER AUTOGRAPH

Reviser	Confirm	Checked	Approval

---Table of Content---

1. SCOPE	4
1.1. Description	4
1.2. Green Requirements	4
2. Input Characteristics	4
2.1. Input Voltage & Frequency	4
2.2. Input AC Current	4
2.3. Inrush Current (cold start)	4
2.4. Averaged Efficiency(Erp)	4
2.5. Energy Consumption	4
3. Output Characteristics	5
3.1. Static Output Characteristics <Vo & R+N>	5
3.2. Line/ Load Regulation	5
3.3. Turn - on Delay Time	5
3.4. Hold-up Time	5
3.5. Rise Time	5
3.6. Fall Time	5
3.7. Output Overshoot / Undershoot	5
3.8. Output Transient Response	5
4. Protection Requirements	5
4.1. Over Voltage Protection	5
4.2. Over Current Protection	6
4.3. Short Circuit Protection	6
5. Environment Requirements	6
5.1. Operating Temperature and Relative Humidity	6
5.2. Storage Temperature and Relative Humidity	6
5.3. Altitude 5000m	6
5.4. Vibration	6
5.5. Drop in	6
6. Reliability Requirements	6
6.1. Burn-in	6
6.2. MTBF Qualification	7
7. EMI/EMS Standards	7
7.1. EMI Standards	7
7.2. EMS Standards	7
8. Safety Standards	8
8.1. Dielectric Strength(Hi-pot)	8
8.2. Leakage Current	8

8.3. Insulation Resistance	8
8.4. Regulatory Standards	8
9. Mechanical Outline Drawing	9
10. I/O Marking Drawing	10
11. Package Drawing	11

1. SCOPE

The document detail the electrical, mechanical and environmental specifications of a Fast Charger, the Fast Charger provide 100W continuous output power.

The Fast Charger shall meet the HSF requirement.

1.1.Description

- | | |
|---|---|
| <input type="checkbox"/> SMPS Adaptor(Wall mount) | <input type="checkbox"/> SMPS Adaptor(Desk-top) |
| <input type="checkbox"/> Open Frame | <input type="checkbox"/> SMPS Unit (With Case) |
| <input type="checkbox"/> PD ADAPTER (Wall mount) | <input checked="" type="checkbox"/> PD ADAPTER (Desk-top) |
| <input type="checkbox"/> Others | |

1.2.Green Requirements

- RoHS:2011/65/EU & (EU) 2015/863;
- REACH:1907/2006/EC;
- Halogen-free:IEC 61249-2-21;
- CA Prop 65;
- POPs:(EU)2023/1608;
- PAHs: 2005/69/EC;
- Packaging Directive:94/62/EC;
- US EPA Toxic Substances Control Act (TSCA);
- MOSO Environmental standards: WI-QM006-G;
- Others

2. Input Characteristics

2.1.Input Voltage & Frequency

The range of input voltage is from 90Vac to 264Vac single phase.

	Minimum	Nominal	Maximum
Input Voltage	90Vac	100Vac~240Vac	264Vac
Input Frequency	47Hz	50Hz/60Hz	63Hz

2.2.Input AC Current

2.5A max. @ 100-240Vac input & Full load

2.3.Inrush Current (cold start)

No damage shall be presented at the cold start.

2.4.Averaged Efficiency(Erp)

- 5V3A: 81.39% min. @115V/230Vac input (@25%, 50%, 75% and 100% of max load)
- 9V3A:86.62% min. @115V/230Vac input (@25%, 50%, 75% and 100% of max load)
- 12V3A:87.40% min. @115V/230Vac input (@25%, 50%, 75% and 100% of max load)
- 15V3A: 87.73% min. @115V/230Vac input (@25%, 50%, 75% and 100% of max load)
- 20V5A:88% min. @115V/230Vac input (@25%, 50%, 75% and 100% of max load)

2.5.Energy Consumption

Input Voltage115Vac 60Hz/230Vac 50Hz , Energy Consumption≤0.21W.

3. Output Characteristics

3.1.Static Output Characteristics <Vo & R+N>

Output Rate	Rated Load		Output Range	R+N	Remark
	Min. Load	Max. Load			
5.00V	0.0A	3.0A	4.5-5.5V	200mVp-p	
9.00V	0.0A	3.0A	8.55-9.45V	200mVp-p	
12.00V	0.0A	3.0A	11.40-12.60V	200mVp-p	
15.00V	0.0A	3.0A	14.25-15.75V	200mVp-p	
20.00V	0.0A	5.0A	19.00-21.00V	200mVp-p	

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (test under the condition of rated input and rated output)

3.2.Line/ Load Regulation

Output Rate	Load Condition		Line Regulation	Load Regulation	Remark
	Min. Load	Max. Load			
5.00V	0.0A	3.0A	± 5%	± 10%	
9.00V	0.0A	3.0A	± 5%	± 5%	
12.00V	0.0A	3.0A	± 5%	± 5%	
15.00V	0.0A	3.0A	± 5%	± 5%	
20.00V	0.0A	5.0A	± 5%	± 5%	

3.3.Turn - on Delay Time

3S max. @ 100Vac to 240Vac input & Full load

3.4.Hold-up Time

10mS min. @ Full load & 115Vac/60Hz input turn off at worst case

20mS min. @ Full load & 230Vac/50Hz input turn off at worst case

3.5.Rise Time

50mS max. @ Rated load

3.6.Fall Time

30mS max. @ Full load

3.7.Output Overshoot / Undershoot

10% max. When the power on or off, when it is the full input voltage and full load

3.8.Output Transient Response

The power supply shall maintain output transient response time within 10ms with a loading current change from 20% to 80% of maximum current and 0.5A/μs rise up /drop down test at end of output terminal.

4. Protection Requirements

4.1.Over Voltage Protection

The output shall hiccup when the over voltage applied to the output rail, and shall be

self-recovery when the fault condition is removed

4.2.Over Current Protection

The output shall hiccup when the over currents applied to the output rail, and shall be self-recovery when the fault condition is removed

4.3.Short Circuit Protection

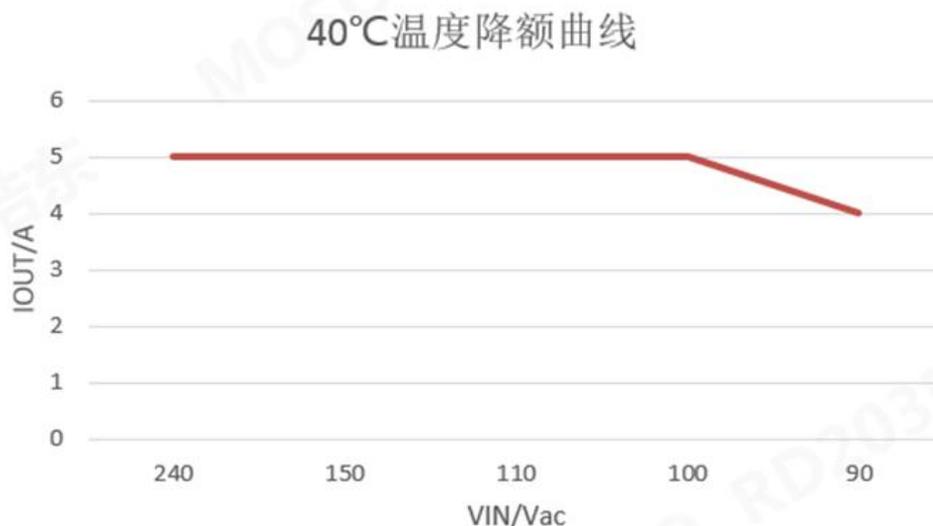
The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed.

5. Environment Requirements

5.1.Operating Temperature and Relative Humidity

0°C to +40°C

10%RH to 90%RH



5.2.Storage Temperature and Relative Humidity

-20°C to +70°C

10%RH to 90%RH

5.3.Altitude 5000m

5.4.Vibration

1.0mm, 10 –55Hz, 15 minutes per cycle for each axis (X, Y, Z).

5.5.Drop in

Dropped freely from 1 m (for wall mount product) height onto the surface is consisted of hardwood 13 mm thick, mounted on two layers of plywood each 19-20 mm thick, all supported on concrete floor 1 time from 3 different surface, after test, it's no safety damage for product.

6. Reliability Requirements

6.1.Burn-in

The power supply shall be burn-in for 4 Hours under normal input and 80% rated load at

40°C.

6.2.MTBF Qualification

The E-caps used in this PSU must be with lifetime of 3 years @25°C @100% load@ 100Vac/60Hz & 240Vac/50Hz input.

7. EMI/EMS Standards

7.1.EMI Standards

GB/T9254 GB17625.1 FCC Part15 EN55032 EN55035

7.2.EMS Standards

7-2-1 EN 61000-4-2,electrostatic discharge(ESD) requirement

Discharge characteristic	Test level	Test criteria
Air discharge	+/-15KV	B
Contact discharge	+/-8KV	B

7-2-2 EN 61000-4-3, radiated electromagnetic field susceptibility(rs)

Test level	Test criteria
3V/m (r.m.s)	A
80-1000MHz,80%AM(1KHz) sine-wave	

7-2-3 EN 61000-4-4,electric fast transients(burst) immunity requirement

Coupling	Test level	Test criteria
AC-input	0.5KV	B
AC-input	1KV	B

7-2-4 EN 61000-4-5,surge capability requirement

Surge voltage	Test criteria
Common mode +/-6KV	B
Differential mode +/-4KV	

7-2-5 EN 61000-4-6, Induced radio frequency fields conducted disturbances

Immunity requirement

Test level	Test criteria
3V	A
0.15-80 MHz,80%AM(1KHz)	

7-2-6 Assessment criteria

Acceptance criteria	Performance
A	Agreed operational behavior within the specified limits
B	Time limited functional diminishment or malfunction during the tests is permitted. The function is self-reactivated by the unit following completion of the tests.
C	Malfunction is permitted .The function can be reactivated either by reconnection to the mains or by operator intervention.

8. Safety Standards

8.1.Dielectric Strength(Hi-pot)

Primary to Secondary: 3000Vac / 10mA Max / 60 second (when safety testing).

Primary to Secondary: 3300Vac / 5mA Max /3S (when production).

8.2.Leakage Current

0.25mA max. at 264Vac / 60Hz

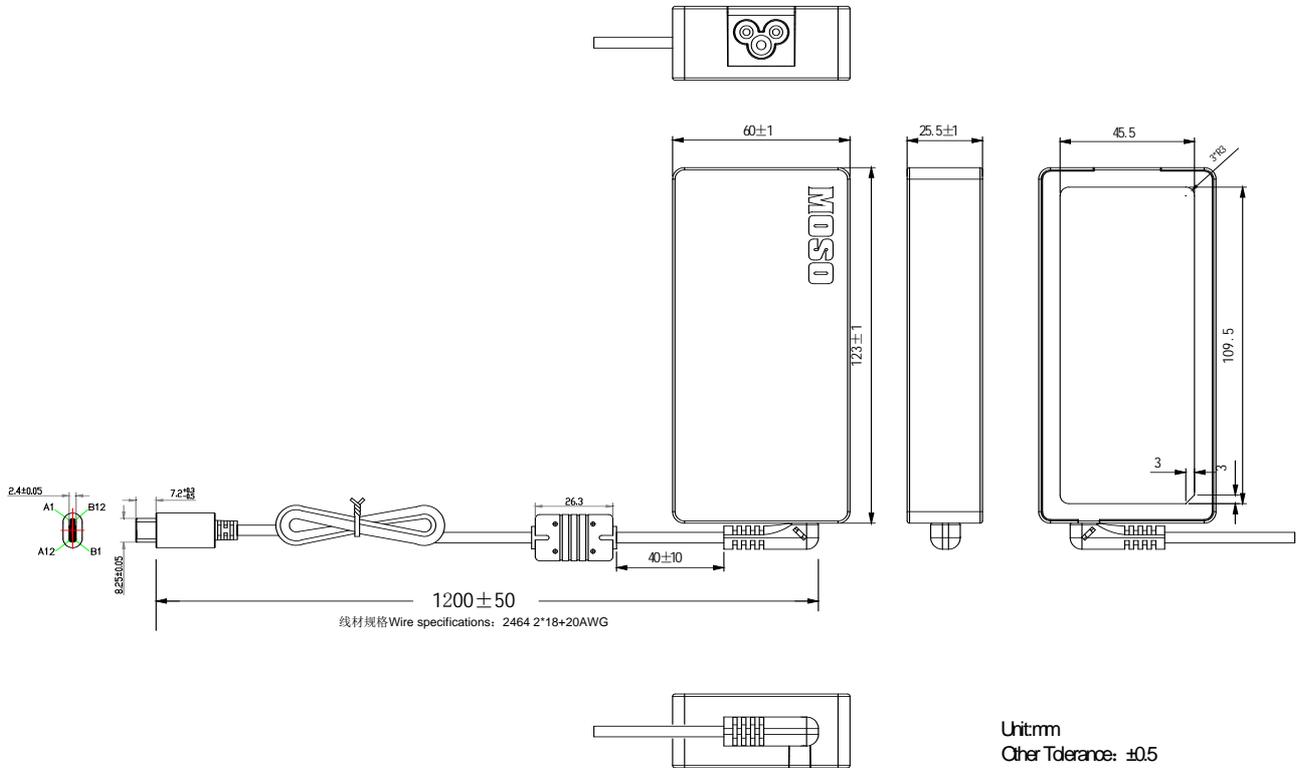
8.3.Insulation Resistance

10MΩ min. at primary to secondary add 500Vdc test voltage

8.4.Regulatory Standards

Type	Country	Standard	Statue	Mark
CCC	China	GB4943.1	APPROVAL	
UL	USA	UL62368-1		

9. Mechanical Outline Drawing



Case material: PC temperature resistance: 120

PC+ABS temperature resistance: 95°C

Remark: 1) PC material compliances with ball pressure testing requirement.
2) The colour of Case is black.

10. I/O Marking Drawing



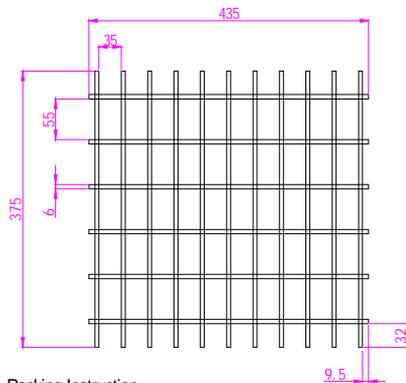
Remark:

1. Above label is laser engraved.
2. The height dimension of double insulation mark and CE mark can NOT less than 5mm.
3. The height dimension of garbage bin mark can NOT less than 7mm.



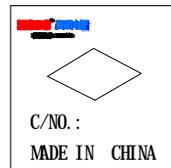
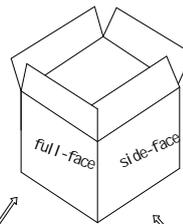
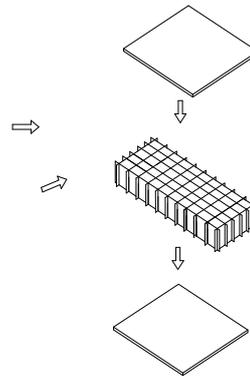
product code(产品编码:实际S编码后六位, 如SD218-E0,取D218E0)
 producing year(产品实际生产年份,年份最后一位, 如2025年, 取5)
 producing month(产品实际生产月份, 如11月, 取11)
 producing date(产品实际生产日期, 如12日, 取12)
 product listing number(产品序列号,000001-999999)

11. Package Drawing



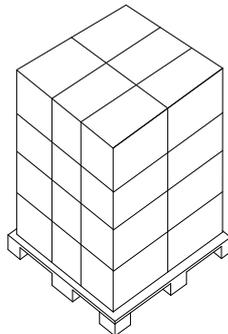
Packing Instruction:

- 1、 the product put in the bag ,
then the packing product put in the
partitioning card groove, 50PCS/floor,
3 floors in all, 150PCS/box
such as: 50pcs/floor*3floor=150PCS/box
- 2、 the usage of the packing materials:
1)the usage of the partitioning card 435*375*77: 3PCS
2)the usage of the bag150*120: 150PCS
3)the usage of the flat 435*375:4PCS
4)carton box 450*390*275: 1PCS
- 3、 Pallet stacke instruction:
1)Pallet size is:L1200*W950*H135mm
2)per floor set 6pcs
3)stacke per 4floor*6pcs carton
total 24 pcs carton

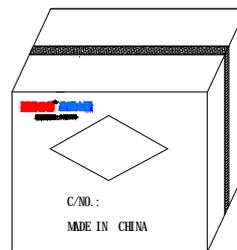


P/O NO.
ITEM NO.
QTY
G.W.: N.W.:
CTN SIZE:

Carton size: 450L*390W*275H

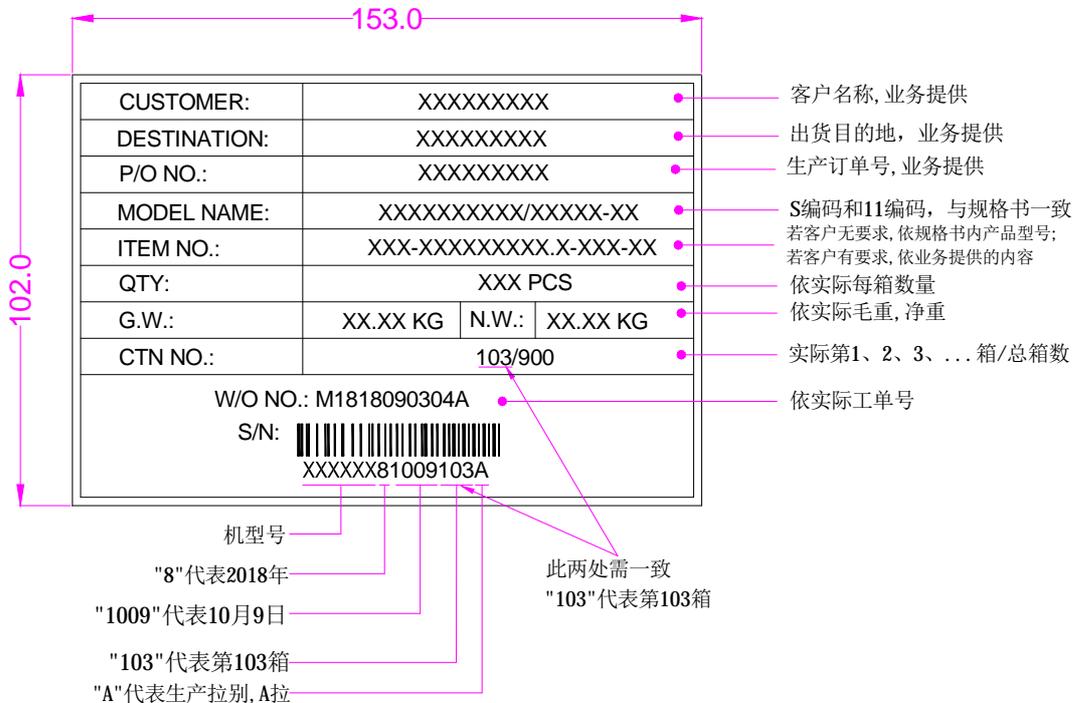


The pallet stack drawing



The product will be packed in the carton box and
the box will be sealed by the sticker

Carton label



技术要求:

1. 材质: 80P铜版纸(来料为空白标签)
2. 颜色: 白底黑字, 公司内部打印
3. 背附胶, 粘贴在纸箱上后, 无翘边等不良;
4. 符合ROHS标准及茂硕环保要求
5. 使用空白料号3230200011