



**Specification for Approval**

**Customer** : \_\_\_\_\_

**Part Name** : **AC ADAPTER**

**Description** : **+5V / 0.2A ~ 2A , + 12V / 0.3A ~ 2.1A**

**Model No.** : **STD-1253 (RoHS )**

**Customer P / N** : \_\_\_\_\_

**Product P / N** : \_\_\_\_\_

**Issued Date** : **21-Sept.-2007**

**Version** : **1.0**

**Issued Stamp** :

**Customer's Approval Signature**

**ADAPTER TECHNOLOGY CO.,LTD.**  
**Office (Taiwan)** : 6F-9, No.258, Lian - Cheng Rd., Chung Ho City, Taipei Hsien, Taiwan, R.O.C.(235)  
**TEL** : +886-2-8226-2279                      **FAX** : +886-2-8226-2238  
**E-mail** : service@ adapter-adapter.com.tw

**Factory (China)** : **Sunrise Electronic Technology Limited**  
**Dongxing Industrial Area ,Hengli Town,DongGuan City,GuangDong, China.**  
**TEL** : 86-769-373-7166    86-769-373-7169  
**FAX** : 86-769-373-6917



<p><b>35.2W</b> Switching Power Adapter <b>SPECIFICATION</b></p>
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**Model No.** : **STD-1253(RoHS)**

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**Description** : **+5V/0.2A ~ 2A , +12V/0.3A ~ 2.1A**

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**Part No.** :

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**Version** : **1.0**

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<b>Approved</b>	<b>Checked</b>	<b>Prepared</b>



## 1. Feature :

- ◆ **Input** : Universal 100 ~ 240 Vac / 47 ~ 63 Hz Input, without any slide switch.
- ◆ **Output** : 5V : 0.2~2A , 12V : 0.3~2.1A
- ◆ **Case Dimension** : 95(L) \* 58 (W) \* 34 (H) mm
- ◆ **Efficiency** : 78% Typical
- ◆ **Safety** : cUL / UL / GS / PSE / BSMI
- ◆ **EMI** : CE Class B ; Conduction & Radiation Met.
- ◆ **Protection** : OVP (Over Voltage Protection) 、SCP (Short Circuit Protection)
- ◆ **High frequency design** , less power consumption.
- ◆ **Suitable for usage at Telecommunication, Computer, Industrial Controller, & OA System.**

## 2. Input :

2.1 Voltage	Universal 100~240Vac, single phase
2.2 Frequency	47 ~ 63 Hz
2.3 Current	0.8A Max.
2.4 Inrush Current	30A Max. / 100Vac ; 60A Max. / 240Vac (Cold Start At 25 °C , Full Load)
2.5 Efficiency	78 % Typ. (At Nominal Line Voltage , Full load)

## 3. Output :

3.1 DC Output	Voltage	5V ± 6% , 12V ± 10%
	Current	5V : 0.2~2A , 12V : 0.3~2.1A
	Regulation	5V : 4.7V ~ 5.3V , 12V : 10.8V ~ 13.2V
	Ripple & Noise	5V : 100 mV Max. , 12V : 200 mV Max.
	Total Power	35.2W Max.

**Remark** : For Ripple & Noise measurement, use a 20MHz bandwidth frequency oscilloscope, and add a 0.1μF multilayer Cap. and a Low ESR Electrolytic Cap. (10 μF) at output connector terminals. (At nominal line voltage, Full Load)

## 4. Protection :

4.1 Over Voltage Protection (OVP)	V out *(105%~150%) Max. ( at 5V & 12V output terminal )
4.2 Short Circuit Protection (SCP)	Automatic recovery after short-circuit fault being removed

**Remark** : When Short Circuit Protection is activated, the power supply will shutdown automatically. Once the abnormal condition resulting in the failure being removed, the power supply will restart accordingly. When Over Voltage Protection is activated, the power supply will shutdown.



## 5. Safety 、 EMI and EMC Requirement :

### 5.1 Safety Requirement

- a. Safety : cUL / UL / GS / PSE / BSMI
- b. Dielectric Strength : 10mA Max. Cut off current

(1)	Primary to Secondary	3000Vac for 1 Minute
(2)	Primary to Frame Ground	1500Vac for 1 Minute

### c. Insulation Resistance :

(1)	Primary to Secondary	10 M OHMS for 500Vdc
(2)	Primary to Frame Ground	10 M OHMS for 500Vdc

5.2 EMI Requirement : CE Class B ; Conduction & Radiation Met.

5.3 Leakage Current : Less than 0.25mA

## 6. Operation and Environment Performance :

### 6.1 Temperature Range

Operating	+ 0°C ~ + 40°C
Storage	- 20 °C ~ + 60 °C

### 6.2 Humidity Range(Non-condensing)

Operating	20% ~ 80% RH
Storage	10% ~ 90% RH

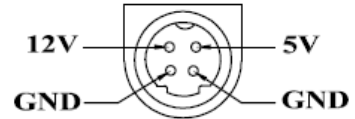
6.3 Cooling : Should operate without fan.

7. M.T.B.F. : 50000 Hrs.( At 25°C , Full Load )

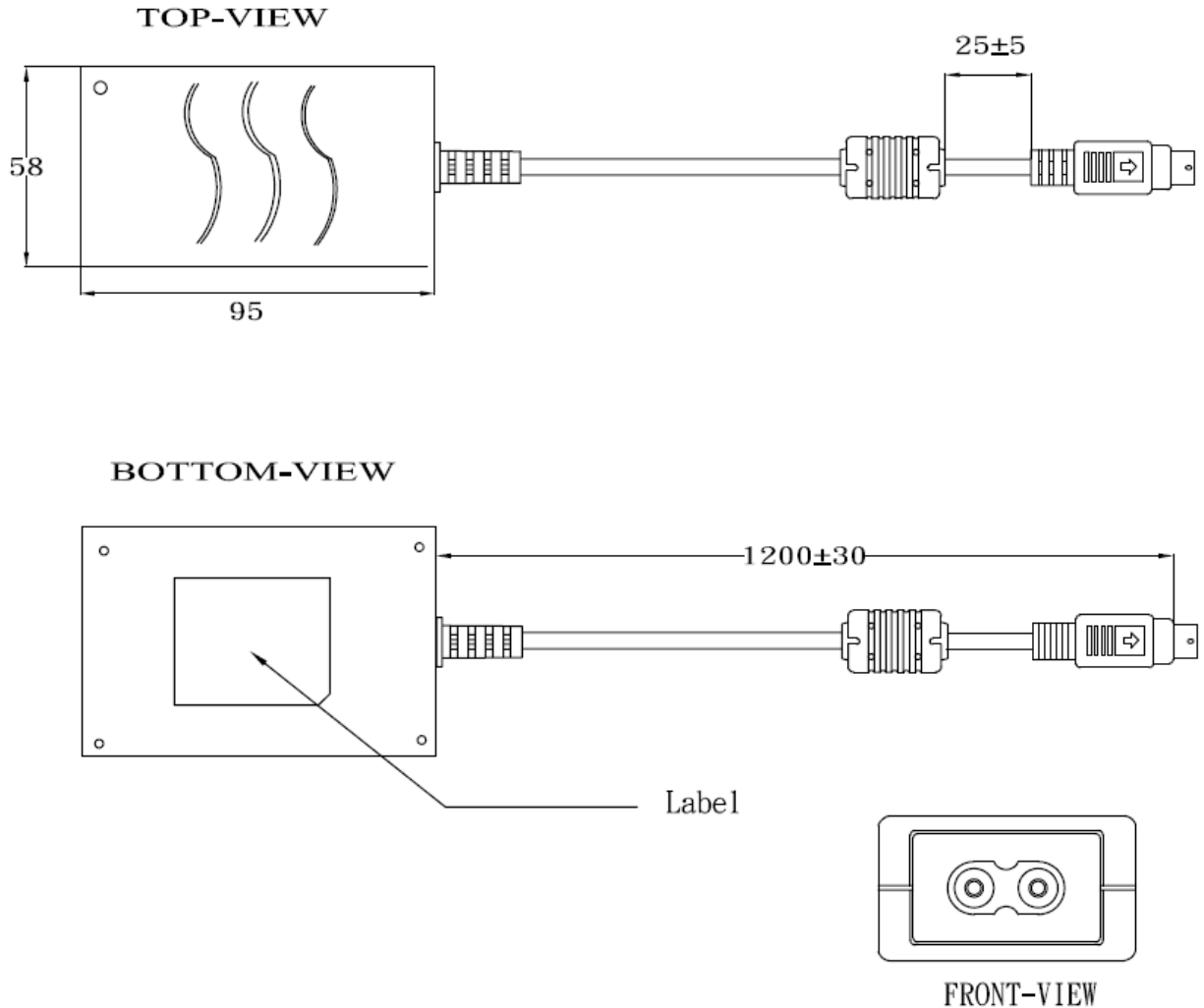


## 8. Mechanical :

- 8.1 Weight : 242 g Typical
- 8.2 Cable Type : Black UL2464 AWG20  
( Wire + Plug )  
Plug : 4 Pin Din
- 8.3 Cable Length : 1200mm
- 8.4 Case Dimension : 95mm(L)\*58mm(W)\*34mm(H)
- 8.5 Material Flammability : UL 94V-0
- 8.6 External Appearance : As drawing below ( Scale  $\pm$  mm )



Shell: No connect (Not Grounded)  
**Output Cable Plug Pin Assignment**





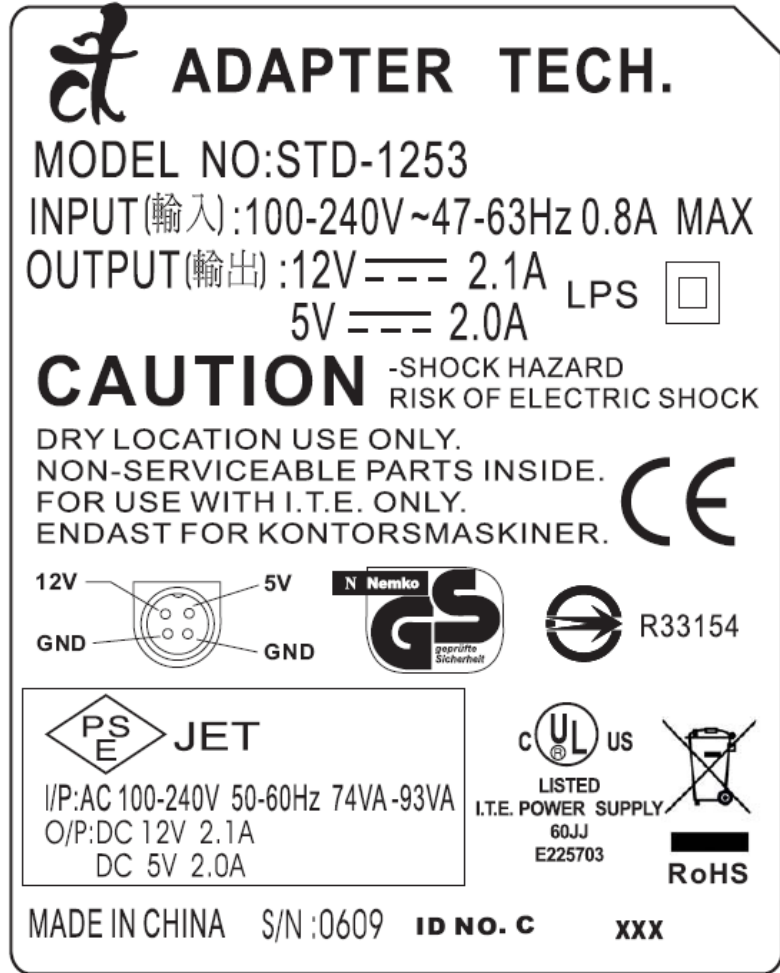
# Adapter Technology Co., Ltd.

8.7 Spec. Label Materials : Metalized Polyester Label ( Silver Gloss-Coated )  
 Color : Black Background with Silver Printing  
 Label Dimension : 49mm(H)\*39mm(W)+/-0.1mm

100%



900%



"XXX"  
 Label supplier's code.  
 It is accurate that the number of words depends on the real finished product.

ID NO. "X"  
 Label manufacturer's code.  
 It is accurate that the number of words depends on the real finished product.

## Label Part No. :9443004411



## A. Line Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
90Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.84 V	4.83 V	4.87 V
	12V : 10.8 ~ 13.2 V	11.96 V	12.04 V	12.07 V
115Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.87 V
	12V : 10.8 ~ 13.2 V	11.90 V	11.99 V	12.06 V
132Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.88 V
	12V : 10.8 ~ 13.2 V	11.89 V	11.97 V	12.02 V
180Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.87 V
	12V : 10.8 ~ 13.2 V	11.86 V	11.95 V	12.00 V
230Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.88 V
	12V : 10.8 ~ 13.2 V	11.85 V	11.93 V	11.98 V
264Vac / 100 % Load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.88 V
	12V : 10.8 ~ 13.2 V	11.84 V	11.91 V	11.97 V

## B. Efficiency Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	78 % Typ.	79.2 %	78.9 %	78.9 %
230Vac / 100 % Load	78 % Typ.	80.6 %	80.2 %	80.2 %

## C. Load Regulation Test

Test Result :

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115 Vac / min. load	5V : 4.7 ~ 5.3 V	5.13 V	5.17 V	5.20 V
	12V : 10.8 ~ 13.2 V	12.02 V	11.93 V	12.02 V
115 Vac / 50% load	5V : 4.7 ~ 5.3 V	5.00 V	5.02 V	5.05 V
	12V : 10.8 ~ 13.2 V	12.00 V	11.96 V	12.06 V
115 Vac / 100 % load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.87 V
	12V : 10.8 ~ 13.2 V	11.90 V	11.99 V	12.06 V
230 Vac / min. load	5V : 4.7 ~ 5.3 V	5.14 V	5.16 V	5.19 V
	12V : 10.8 ~ 13.2 V	11.94 V	11.92 V	12.04 V
230 Vac / 50% load	5V : 4.7 ~ 5.3 V	5.00 V	5.02 V	5.05 V
	12V : 10.8 ~ 13.2 V	11.98 V	11.95 V	12.05 V
230 Vac / 100% load	5V : 4.7 ~ 5.3 V	4.85 V	4.84 V	4.88 V
	12V : 10.8 ~ 13.2 V	11.86 V	11.84 V	11.98 V



**D. Ripple & Noise Test**

**Test Result :**

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	5V : 100mV Max.	79 mV	77 mV	82 mV
	12V : 200mV Max.	70 mV	67 mV	74 mV
230Vac / 100 % Load	5V : 100mV Max.	70 mV	72 mV	80 mV
	12V : 200mV Max.	65 mV	63 mV	70 mV

**E. Inrush Current**

**Test Result :**

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	30A Max	21A	24A	23A
230Vac / 100 % Load	60A Max	47A	44A	46A

**F. Short Circuit Protection**

**Test Result :**

Test condition	Spec.	Reading 1	Reading 2	Reading 3
115Vac / 100 % Load	Auto Recovery	OK	OK	OK
230Vac / 100 % Load	Auto Recovery	OK	OK	OK