

ERP TEST REPORT FOR
S1001622
Fuyuan Electronic Co., Ltd

Switching Power Supply
Model No.: FYxxxxyyy series

Prepared for : Fuyuan Electronic Co., Ltd
Address : Xiewu Village, Hengshan, Shipai Town, Dongguan,
Guangdong
Prepared by : Usai Technology Services Co., Ltd.
Address : 3rd Floor, Tiandi Industrial Building, North ChaGuang Rd,
XiLi Town, NanShan, ShenZhen, 518055, China
Tel : +86-755-2673 4311(5 lines);
Fax : +86-755-2673 4059
E-mail : szusai@21cn.net

Report No. : S1001622
Date of Test : 2009-12-28
Date of Report : 2009-12-30

Test Report Declaration

| | | |
|--------------|---|---|
| Applicant | : | Fuyuan Electronic Co., Ltd |
| Address | : | Xiewu Village, Hengshan, Shipai Town, Dongguan, Guangdong |
| Manufacturer | : | Fuyuan Electronic Co., Ltd |
| Address | : | Xiewu Village, Hengshan, Shipai Town, Dongguan, Guangdong |
| Product | : | Switching Power Supply |
| Model No | : | FYxxxxyyy series |
| Rating | : | FYXXYYYY series, Input: 100-240Vac, 50/60Hz, 2.5A I) XXX: Three digits, from 030 to 580 indicates the output voltage in volt when divided by 10, II) YYY: Four digits, from 0300 to 7500 indicates the output current in Ampere when divided by 1000. The EUTs are desk-top type switching power supply intended to use for information technology equipments. |
| Remark | : | Test of models FY1267500 (Max. output current), FY2904000 (Mid Voltage), and FY5802000 (Max. Output Voltage) representing all models. |

This report shows that the EUT (Equipment Under Test) is technically compliant with the Commission Regulation (EC) No 278/2009 requirements.

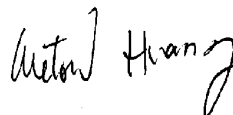
Prepared by :



(Harry Chen/Project Engineer)



Reviewer :



(Wetow Huang/Tech. Manager)

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY1267500

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 12.6 | V |
| Rated Output Current | 7500 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|-------------|
| Rated Output Power (Voltage x Current): | 94.50 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 115 VAC / 60 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 85.04% | 84.88% | 84.82% | 84.9% |
| 75% Load Efficiency | 86.80% | 86.56% | 86.63% | 86.7% |
| 50% Load Efficiency | 87.68% | 87.49% | 87.30% | 87.5% |
| 25% Load Efficiency | 88.33% | 88.05% | 87.98% | 88.1% |
| Average Active Mode Efficiency | 87.0% | 86.7% | 86.7% | 86.8% |
| No Load Input Power (W) | 0.17 | 0.18 | 0.18 | 0.18 |

This Power Supply Meets Tier 1 Efficiency Standards At 115VAC / 60Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|--------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 7500 mA | Measured Input Power | 110.77 W |
| Min Output Current | 7350 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 7650 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 7500 mA | True Power Factor | 0.902 |
| Measured Output Voltage | 12.56 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 94.20 W | Calculated Power Consumed | 16.57 W |
| | | Calculated Efficiency (Output/Input) | 85.04% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 5625 mA | Measured Input Power | 81.59 W |
| Min Output Current | 5475 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 5775 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 5625 mA | True Power Factor | 0.892 |
| Measured Output Voltage | 12.59 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 70.82 W | Calculated Power Consumed | 10.77 W |
| | | Calculated Efficiency (Output/Input) | 86.80% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 3750 mA | Measured Input Power | 53.93 W |
| Min Output Current | 3600 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 3900 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 3750 mA | True Power Factor | 0.877 |
| Measured Output Voltage | 12.61 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 47.29 W | Calculated Power Consumed | 6.64 W |
| | | Calculated Efficiency (Output/Input) | 87.68% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1875 mA | Measured Input Power | 26.83 W |
| Min Output Current | 1725 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2025 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1875 mA | True Power Factor | 0.848 |
| Measured Output Voltage | 12.64 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 23.70 W | Calculated Power Consumed | 3.13 W |
| | | Calculated Efficiency (Output/Input) | 88.33% |
| Average Active Mode Efficiency: | | 87.0% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.172 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.015 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #1 Meets The Tier 1 No Load Standard | | | |

Sample #2 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 7500 mA | Measured Input Power | 110.71 W |
| Min Output Current | 7350 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 7650 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 7500 mA | True Power Factor | 0.901 |
| Measured Output Voltage | 12.53 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 93.98 W | Calculated Power Consumed | 16.74 W |
| | | Calculated Efficiency (Ouput/Input) | 84.88% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 5625 mA | Measured Input Power | 81.55 W |
| Min Output Current | 5475 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 5775 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 5625 mA | True Power Factor | 0.891 |
| Measured Output Voltage | 12.55 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 70.59 W | Calculated Power Consumed | 10.96 W |
| | | Calculated Efficiency (Ouput/Input) | 86.56% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 3750 mA | Measured Input Power | 53.92 W |
| Min Output Current | 3600 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 3900 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 3750 mA | True Power Factor | 0.875 |
| Measured Output Voltage | 12.58 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 47.18 W | Calculated Power Consumed | 6.75 W |
| | | Calculated Efficiency (Ouput/Input) | 87.49% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1875 mA | Measured Input Power | 26.83 W |
| Min Output Current | 1725 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2025 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1875 mA | True Power Factor | 0.847 |
| Measured Output Voltage | 12.60 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 23.63 W | Calculated Power Consumed | 3.21 W |
| | | Calculated Efficiency (Ouput/Input) | 88.05% |
| Average Active Mode Efficiency: | | | 86.7% |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.180 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.015 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #2 Meets The Tier 1 No Load Standard | | | |

Sample #3 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 7500 mA | Measured Input Power | 111.23 W |
| Min Output Current | 7350 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 7650 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 7500 mA | True Power Factor | 0.905 |
| Measured Output Voltage | 12.58 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 94.35 W | Calculated Power Consumed | 16.88 W |
| | | Calculated Efficiency (Ouput/Input) | 84.82% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 5625 mA | Measured Input Power | 81.75 W |
| Min Output Current | 5475 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 5775 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 5625 mA | True Power Factor | 0.895 |
| Measured Output Voltage | 12.59 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 70.82 W | Calculated Power Consumed | 10.93 W |
| | | Calculated Efficiency (Ouput/Input) | 86.63% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 3750 mA | Measured Input Power | 54.21 W |
| Min Output Current | 3600 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 3900 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 3750 mA | True Power Factor | 0.879 |
| Measured Output Voltage | 12.62 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 47.33 W | Calculated Power Consumed | 6.89 W |
| | | Calculated Efficiency (Ouput/Input) | 87.30% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1875 mA | Measured Input Power | 26.96 W |
| Min Output Current | 1725 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2025 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1875 mA | True Power Factor | 0.848 |
| Measured Output Voltage | 12.65 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 23.72 W | Calculated Power Consumed | 3.24 W |
| | | Calculated Efficiency (Ouput/Input) | 87.98% |
| Average Active Mode Efficiency: | | 86.7% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.18 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.012 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY1267500

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 12.6 | V |
| Rated Output Current | 7500 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|------------------|
| Rated Output Power (Voltage x Current): | 94.50 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 230 VAC / 50 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 87.08% | 86.53% | 85.97% | 86.5% |
| 75% Load Efficiency | 86.91% | 86.11% | 86.17% | 86.4% |
| 50% Load Efficiency | 87.70% | 87.01% | 85.31% | 86.7% |
| 25% Load Efficiency | 87.32% | 85.70% | 85.51% | 86.2% |
| Average Active Mode Efficiency | 87.3% | 86.3% | 85.7% | 86.4% |
| No Load Input Power (W) | 0.28 | 0.27 | 0.22 | 0.26 |

This Power Supply Meets Tier 1 Efficiency Standards At 230VAC / 50Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 7500 mA | Measured Input Power | 108.09 W |
| Min Output Current | 7350 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 7650 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 7500 mA | True Power Factor | 0.858 |
| Measured Output Voltage | 12.55 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 94.13 W | Calculated Power Consumed | 13.97 W |
| | | Calculated Efficiency (Ouput/Input) | 87.08% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 5625 mA | Measured Input Power | 81.42 W |
| Min Output Current | 5475 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 5775 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 5625 mA | True Power Factor | 0.842 |
| Measured Output Voltage | 12.58 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 70.76 W | Calculated Power Consumed | 10.66 W |
| | | Calculated Efficiency (Ouput/Input) | 86.91% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 3750 mA | Measured Input Power | 53.92 W |
| Min Output Current | 3600 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 3900 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 3750 mA | True Power Factor | 0.801 |
| Measured Output Voltage | 12.61 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 47.29 W | Calculated Power Consumed | 6.63 W |
| | | Calculated Efficiency (Ouput/Input) | 87.70% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1875 mA | Measured Input Power | 27.14 W |
| Min Output Current | 1725 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2025 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1875 mA | True Power Factor | 0.706 |
| Measured Output Voltage | 12.64 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 23.70 W | Calculated Power Consumed | 3.44 W |
| | | Calculated Efficiency (Ouput/Input) | 87.32% |
| Average Active Mode Efficiency: | | 87.3% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.277 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.015 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #1 Meets The Tier 1 No Load Standard | | | |

Sample #2 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|-------------------------------------|---------------|
| Load Condition #1: 100% | | Measured Input Power | 108.6 W |
| Set Output Current to | 7500 mA | Measured Input Voltage | 230 VAC |
| Min Output Current | 7350 mA | Measured Frequency | 50 Hz |
| Max Output Current | 7650 mA | True Power Factor | 0.852 |
| Measured Output Current | 7500 mA | Total Harmonic Distortion (THD) | % |
| Measured Output Voltage | 12.53 V | Calculated Power Consumed | 14.63 W |
| Calculated Output Power | 93.98 W | Calculated Efficiency (Ouput/Input) | 86.53% |
| Load Condition #2: 75% | | Measured Input Power | 81.98 W |
| Set Output Current to | 5625 mA | Measured Input Voltage | 230 VAC |
| Min Output Current | 5475 mA | Measured Frequency | 50 Hz |
| Max Output Current | 5775 mA | True Power Factor | 0.818 |
| Measured Output Current | 5625 mA | Total Harmonic Distortion (THD) | % |
| Measured Output Voltage | 12.55 V | Calculated Power Consumed | 11.39 W |
| Calculated Output Power | 70.59 W | Calculated Efficiency (Ouput/Input) | 86.11% |
| Load Condition #3: 50% | | Measured Input Power | 54.22 W |
| Set Output Current to | 3750 mA | Measured Input Voltage | 230 VAC |
| Min Output Current | 3600 mA | Measured Frequency | 50 Hz |
| Max Output Current | 3900 mA | True Power Factor | 0.753 |
| Measured Output Current | 3750 mA | Total Harmonic Distortion (THD) | % |
| Measured Output Voltage | 12.58 V | Calculated Power Consumed | 7.05 W |
| Calculated Output Power | 47.18 W | Calculated Efficiency (Ouput/Input) | 87.01% |
| Load Condition #4: 25% | | Measured Input Power | 27.59 W |
| Set Output Current to | 1875 mA | Measured Input Voltage | 230 VAC |
| Min Output Current | 1725 mA | Measured Frequency | 50 Hz |
| Max Output Current | 2025 mA | True Power Factor | 0.683 |
| Measured Output Current | 1875 mA | Total Harmonic Distortion (THD) | % |
| Measured Output Voltage | 12.61 V | Calculated Power Consumed | 3.95 W |
| Calculated Output Power | 23.64 W | Calculated Efficiency (Ouput/Input) | 85.70% |
| Average Active Mode Efficiency: | | | 86.3% |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.27 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.012 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #2 Meets The Tier 1 No Load Standard | | | |

Sample #3 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|---------|--------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 7500 mA | Measured Input Power | 109.4 W |
| Min Output Current | 7350 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 7650 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 7500 mA | True Power Factor | 0.864 |
| Measured Output Voltage | 12.54 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 94.05 W | Calculated Power Consumed | 15.35 W |
| | | Calculated Efficiency (Output/Input) | 85.97% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 5625 mA | Measured Input Power | 82.12 W |
| Min Output Current | 5475 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 5775 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 5625 mA | True Power Factor | 0.823 |
| Measured Output Voltage | 12.58 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 70.76 W | Calculated Power Consumed | 11.36 W |
| | | Calculated Efficiency (Output/Input) | 86.17% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 3750 mA | Measured Input Power | 55.43 W |
| Min Output Current | 3600 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 3900 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 3750 mA | True Power Factor | 0.762 |
| Measured Output Voltage | 12.61 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 47.29 W | Calculated Power Consumed | 8.14 W |
| | | Calculated Efficiency (Output/Input) | 85.31% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1875 mA | Measured Input Power | 27.76 W |
| Min Output Current | 1725 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2025 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1875 mA | True Power Factor | 0.701 |
| Measured Output Voltage | 12.66 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 23.74 W | Calculated Power Consumed | 4.02 W |
| | | Calculated Efficiency (Output/Input) | 85.51% |
| Average Active Mode Efficiency: | | 85.7% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.22 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.015 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY2904000

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 29 | V |
| Rated Output Current | 4000 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|-------------|
| Rated Output Power (Voltage x Current): | 116.00 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 115 VAC / 60 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 88.33% | 88.13% | 88.52% | 88.3% |
| 75% Load Efficiency | 87.84% | 87.67% | 88.03% | 87.8% |
| 50% Load Efficiency | 88.34% | 87.70% | 88.44% | 88.2% |
| 25% Load Efficiency | 89.49% | 89.38% | 88.46% | 89.1% |
| Average Active Mode Efficiency | 88.5% | 88.2% | 88.4% | 88.4% |
| No Load Input Power (W) | 0.29 | 0.31 | 0.32 | 0.31 |

This Power Supply Meets Tier 1 Efficiency Standards At 115VAC / 60Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 4000 mA | Measured Input Power | 134.00 W |
| Min Output Current | 3920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 4080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 4000 mA | True Power Factor | 0.906 |
| Measured Output Voltage | 29.59 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 118.36 W | Calculated Power Consumed | 15.64 W |
| | | Calculated Efficiency (Ouput/Input) | 88.33% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 3000 mA | Measured Input Power | 101.09 W |
| Min Output Current | 2920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 3080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 3000 mA | True Power Factor | 0.899 |
| Measured Output Voltage | 29.60 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.80 W | Calculated Power Consumed | 12.29 W |
| | | Calculated Efficiency (Ouput/Input) | 87.84% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 67.04 W |
| Min Output Current | 1920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.882 |
| Measured Output Voltage | 29.61 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 59.22 W | Calculated Power Consumed | 7.82 W |
| | | Calculated Efficiency (Ouput/Input) | 88.34% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 33.10 W |
| Min Output Current | 920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.855 |
| Measured Output Voltage | 29.62 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.62 W | Calculated Power Consumed | 3.48 W |
| | | Calculated Efficiency (Ouput/Input) | 89.49% |
| Average Active Mode Efficiency: | | 88.5% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.293 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.108 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #1 Meets The Tier 1 No Load Standard | | | |

Sample #2 Test Results - 115 VAC / 60 Hz

| Output Measurements | AC Input Measurements |
|---|---|
| Load Condition #1: 100% | |
| Set Output Current to 4000 mA Min Output Current 3920 mA Max Output Current 4080 mA Measured Output Current 4000 mA Measured Output Voltage 29.51 V Calculated Output Power 118.04 W | Measured Input Power 133.94 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.907 Total Harmonic Distortion (THD) % Calculated Power Consumed 15.90 W Calculated Efficiency (Ouput/Input) 88.13% |
| Load Condition #2: 75% | |
| Set Output Current to 3000 mA Min Output Current 2920 mA Max Output Current 3080 mA Measured Output Current 3000 mA Measured Output Voltage 29.51 V Calculated Output Power 88.53 W | Measured Input Power 100.98 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.901 Total Harmonic Distortion (THD) % Calculated Power Consumed 12.45 W Calculated Efficiency (Ouput/Input) 87.67% |
| Load Condition #3: 50% | |
| Set Output Current to 2000 mA Min Output Current 1920 mA Max Output Current 2080 mA Measured Output Current 2000 mA Measured Output Voltage 29.52 V Calculated Output Power 59.04 W | Measured Input Power 67.32 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.886 Total Harmonic Distortion (THD) % Calculated Power Consumed 8.28 W Calculated Efficiency (Ouput/Input) 87.70% |
| Load Condition #4: 25% | |
| Set Output Current to 1000 mA Min Output Current 920 mA Max Output Current 1080 mA Measured Output Current 1000 mA Measured Output Voltage 29.54 V Calculated Output Power 29.54 W | Measured Input Power 33.05 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.861 Total Harmonic Distortion (THD) % Calculated Power Consumed 3.51 W Calculated Efficiency (Ouput/Input) 89.38% |
| Average Active Mode Efficiency: 88.2% | |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | |

| Load condition #5: No Load | AC Input Measurements |
|--|---|
| Set the Output to No Load | Measured Input Power 0.312 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.119 Total Harmonic Distortion (THD) % |
| Sample #2 Meets The Tier 1 No Load Standard | |

Sample #3 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 4000 mA | Measured Input Power | 133.8 W |
| Min Output Current | 3920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 4080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 4000 mA | True Power Factor | 0.905 |
| Measured Output Voltage | 29.61 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 118.44 W | Calculated Power Consumed | 15.36 W |
| | | Calculated Efficiency (Ouput/Input) | 88.52% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 3000 mA | Measured Input Power | 100.98 W |
| Min Output Current | 2920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 3080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 3000 mA | True Power Factor | 0.896 |
| Measured Output Voltage | 29.63 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.89 W | Calculated Power Consumed | 12.09 W |
| | | Calculated Efficiency (Ouput/Input) | 88.03% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 67.05 W |
| Min Output Current | 1920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.881 |
| Measured Output Voltage | 29.65 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 59.30 W | Calculated Power Consumed | 7.75 W |
| | | Calculated Efficiency (Ouput/Input) | 88.44% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 33.54 W |
| Min Output Current | 920 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1080 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.851 |
| Measured Output Voltage | 29.67 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.67 W | Calculated Power Consumed | 3.87 W |
| | | Calculated Efficiency (Ouput/Input) | 88.46% |
| Average Active Mode Efficiency: | | 88.4% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.323 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.122 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY2904000

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 29 | V |
| Rated Output Current | 4000 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|-------------|
| Rated Output Power (Voltage x Current): | 116.00 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 230 VAC / 50 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 89.18% | 89.22% | 89.72% | 89.4% |
| 75% Load Efficiency | 87.96% | 87.87% | 88.11% | 88.0% |
| 50% Load Efficiency | 87.06% | 86.93% | 87.33% | 87.1% |
| 25% Load Efficiency | 90.00% | 89.27% | 87.80% | 89.0% |
| Average Active Mode Efficiency | 88.5% | 88.3% | 88.2% | 88.4% |
| No Load Input Power (W) | 0.40 | 0.34 | 0.43 | 0.39 |

This Power Supply Meets Tier 1 Efficiency Standards At 230VAC / 50Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 230 VAC / 50 Hz

| Output Measurements | AC Input Measurements |
|---|---|
| Load Condition #1: 100% | |
| Set Output Current to 4000 mA Min Output Current 3920 mA Max Output Current 4080 mA Measured Output Current 4000 mA Measured Output Voltage 29.59 V Calculated Output Power 118.36 W | Measured Input Power 132.72 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.862 Total Harmonic Distortion (THD) % Calculated Power Consumed 14.36 W Calculated Efficiency (Ouput/Input) 89.18% |
| Load Condition #2: 75% | |
| Set Output Current to 3000 mA Min Output Current 2920 mA Max Output Current 3080 mA Measured Output Current 3000 mA Measured Output Voltage 29.59 V Calculated Output Power 88.77 W | Measured Input Power 100.92 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.836 Total Harmonic Distortion (THD) % Calculated Power Consumed 12.15 W Calculated Efficiency (Ouput/Input) 87.96% |
| Load Condition #3: 50% | |
| Set Output Current to 2000 mA Min Output Current 1920 mA Max Output Current 2080 mA Measured Output Current 2000 mA Measured Output Voltage 29.59 V Calculated Output Power 59.18 W | Measured Input Power 67.98 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.791 Total Harmonic Distortion (THD) % Calculated Power Consumed 8.80 W Calculated Efficiency (Ouput/Input) 87.06% |
| Load Condition #4: 25% | |
| Set Output Current to 1000 mA Min Output Current 920 mA Max Output Current 1080 mA Measured Output Current 1000 mA Measured Output Voltage 29.61 V Calculated Output Power 29.61 W | Measured Input Power 32.90 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.703 Total Harmonic Distortion (THD) % Calculated Power Consumed 3.29 W Calculated Efficiency (Ouput/Input) 90.00% |
| Average Active Mode Efficiency: 88.5% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | |

| | |
|--|---|
| Load condition #5: No Load Set the Output to No Load | AC Input Measurements Measured Input Power 0.404 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.008 Total Harmonic Distortion (THD) % |
| Sample #1 Meets The Tier 1 No Load Standard | |

Sample #2 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 4000 mA | Measured Input Power | 132.34 W |
| Min Output Current | 3920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 4080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 4000 mA | True Power Factor | 0.862 |
| Measured Output Voltage | 29.52 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 118.08 W | Calculated Power Consumed | 14.26 W |
| | | Calculated Efficiency (Ouput/Input) | 89.22% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 3000 mA | Measured Input Power | 100.79 W |
| Min Output Current | 2920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 3080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 3000 mA | True Power Factor | 0.827 |
| Measured Output Voltage | 29.52 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.56 W | Calculated Power Consumed | 12.23 W |
| | | Calculated Efficiency (Ouput/Input) | 87.87% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 67.94 W |
| Min Output Current | 1920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.778 |
| Measured Output Voltage | 29.53 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 59.06 W | Calculated Power Consumed | 8.88 W |
| | | Calculated Efficiency (Ouput/Input) | 86.93% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 33.08 W |
| Min Output Current | 920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.699 |
| Measured Output Voltage | 29.53 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.53 W | Calculated Power Consumed | 3.55 W |
| | | Calculated Efficiency (Ouput/Input) | 89.27% |
| Average Active Mode Efficiency: | | 88.3% | |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.335 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.009 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #2 Meets The Tier 1 No Load Standard | | | |

Sample #3 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 4000 mA | Measured Input Power | 132.06 W |
| Min Output Current | 3920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 4080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 4000 mA | True Power Factor | 0.874 |
| Measured Output Voltage | 29.62 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 118.48 W | Calculated Power Consumed | 13.58 W |
| | | Calculated Efficiency (Ouput/Input) | 89.72% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 3000 mA | Measured Input Power | 100.85 W |
| Min Output Current | 2920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 3080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 3000 mA | True Power Factor | 0.839 |
| Measured Output Voltage | 29.62 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.86 W | Calculated Power Consumed | 11.99 W |
| | | Calculated Efficiency (Ouput/Input) | 88.11% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 67.86 W |
| Min Output Current | 1920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.793 |
| Measured Output Voltage | 29.63 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 59.26 W | Calculated Power Consumed | 8.60 W |
| | | Calculated Efficiency (Ouput/Input) | 87.33% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 33.76 W |
| Min Output Current | 920 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1080 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.705 |
| Measured Output Voltage | 29.64 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.64 W | Calculated Power Consumed | 4.12 W |
| | | Calculated Efficiency (Ouput/Input) | 87.80% |
| Average Active Mode Efficiency: | | 88.2% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.43 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.011 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY5802000

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 58 | V |
| Rated Output Current | 2000 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|-------------|
| Rated Output Power (Voltage x Current): | 116.00 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 115 VAC / 60 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 87.88% | 88.40% | 88.57% | 88.3% |
| 75% Load Efficiency | 88.01% | 88.27% | 87.20% | 87.8% |
| 50% Load Efficiency | 89.64% | 88.25% | 88.01% | 88.6% |
| 25% Load Efficiency | 88.02% | 88.24% | 87.91% | 88.1% |
| Average Active Mode Efficiency | 88.4% | 88.3% | 87.9% | 88.2% |
| No Load Input Power (W) | 0.42 | 0.47 | 0.46 | 0.45 |

This Power Supply Meets Tier 1 Efficiency Standards At 115VAC / 60Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 133.57 W |
| Min Output Current | 1960 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2040 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.905 |
| Measured Output Voltage | 58.69 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 117.38 W | Calculated Power Consumed | 16.19 W |
| | | Calculated Efficiency (Ouput/Input) | 87.88% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 1500 mA | Measured Input Power | 99.99 W |
| Min Output Current | 1460 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1540 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1500 mA | True Power Factor | 0.897 |
| Measured Output Voltage | 58.67 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.01 W | Calculated Power Consumed | 11.99 W |
| | | Calculated Efficiency (Ouput/Input) | 88.01% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 65.43 W |
| Min Output Current | 960 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1040 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.881 |
| Measured Output Voltage | 58.65 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 58.65 W | Calculated Power Consumed | 6.78 W |
| | | Calculated Efficiency (Ouput/Input) | 89.64% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 500 mA | Measured Input Power | 33.31 W |
| Min Output Current | 460 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 540 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 500 mA | True Power Factor | 0.854 |
| Measured Output Voltage | 58.64 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.32 W | Calculated Power Consumed | 3.99 W |
| | | Calculated Efficiency (Ouput/Input) | 88.02% |
| Average Active Mode Efficiency: | | 88.4% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.42 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.149 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #1 Meets The Tier 1 No Load Standard | | | |

Sample #2 Test Results - 115 VAC / 60 Hz

| Output Measurements | AC Input Measurements |
|--|---|
| Load Condition #1: 100% | |
| Set Output Current to 2000 mA Min Output Current 1960 mA Max Output Current 2040 mA Measured Output Current 2000 mA Measured Output Voltage 58.93 V Calculated Output Power 117.86 W | Measured Input Power 133.33 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.906 Total Harmonic Distortion (THD) % Calculated Power Consumed 15.47 W Calculated Efficiency (Ouput/Input) 88.40% |
| Load Condition #2: 75% | |
| Set Output Current to 1500 mA Min Output Current 1460 mA Max Output Current 1540 mA Measured Output Current 1500 mA Measured Output Voltage 58.95 V Calculated Output Power 88.43 W | Measured Input Power 100.18 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.898 Total Harmonic Distortion (THD) % Calculated Power Consumed 11.76 W Calculated Efficiency (Ouput/Input) 88.27% |
| Load Condition #3: 50% | |
| Set Output Current to 1000 mA Min Output Current 960 mA Max Output Current 1040 mA Measured Output Current 1000 mA Measured Output Voltage 58.96 V Calculated Output Power 58.96 W | Measured Input Power 66.81 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.882 Total Harmonic Distortion (THD) % Calculated Power Consumed 7.85 W Calculated Efficiency (Ouput/Input) 88.25% |
| Load Condition #4: 25% | |
| Set Output Current to 500 mA Min Output Current 460 mA Max Output Current 540 mA Measured Output Current 500 mA Measured Output Voltage 58.98 V Calculated Output Power 29.49 W | Measured Input Power 33.42 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.854 Total Harmonic Distortion (THD) % Calculated Power Consumed 3.93 W Calculated Efficiency (Ouput/Input) 88.24% |
| Average Active Mode Efficiency: 88.3% | |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | |

| | |
|--|--|
| Load condition #5: No Load Set the Output to No Load | AC Input Measurements Measured Input Power 0.47 W Measured Input Voltage 115 VAC Measured Frequency 60 Hz True Power Factor 0.172 Total Harmonic Distortion (THD) % |
| Sample #2 Meets The Tier 1 No Load Standard | |

Sample #3 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|-------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 132.8 W |
| Min Output Current | 1960 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 2040 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.507 |
| Measured Output Voltage | 58.81 V | Total Harmonic Distortion (THD) | 0.912 % |
| Calculated Output Power | 117.62 W | Calculated Power Consumed | 15.18 W |
| | | Calculated Efficiency (Ouput/Input) | 88.57% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 1500 mA | Measured Input Power | 101.2 W |
| Min Output Current | 1460 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1540 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1500 mA | True Power Factor | 0.901 |
| Measured Output Voltage | 58.83 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.25 W | Calculated Power Consumed | 12.96 W |
| | | Calculated Efficiency (Ouput/Input) | 87.20% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 66.9 W |
| Min Output Current | 960 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 1040 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.886 |
| Measured Output Voltage | 58.88 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 58.88 W | Calculated Power Consumed | 8.02 W |
| | | Calculated Efficiency (Ouput/Input) | 88.01% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 500 mA | Measured Input Power | 33.51 W |
| Min Output Current | 460 mA | Measured Input Voltage | 115 VAC |
| Max Output Current | 540 mA | Measured Frequency | 60 Hz |
| Measured Output Current | 500 mA | True Power Factor | 0.862 |
| Measured Output Voltage | 58.92 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.46 W | Calculated Power Consumed | 4.05 W |
| | | Calculated Efficiency (Ouput/Input) | 87.91% |
| Average Active Mode Efficiency: | | 87.9% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.46 W |
| | | Measured Input Voltage | 115 VAC |
| | | Measured Frequency | 60 Hz |
| | | True Power Factor | 0.178 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

**Usai Technology Services Co., Ltd.
Tier 1 External Power Supply Efficiency**

Manufacturer: Fuyuan Electronic Co., Ltd.
SKU Number: N.A **Cord Length (cm):** N/A
Product Description: Model:FY5802000

Enter Applicable Nameplate Information

| | | |
|--------------------------|---------|-----|
| Rated AC Input Voltage | 100-240 | VAC |
| Rated Input Power | N.A | W |
| Rated AC Input Current | 2.5 | A |
| Rated Input Volt-Amperes | N.A | VA |
| Rated Input AC Frequency | 50/60 | Hz |
| Rated Output Voltage | 58 | V |
| Rated Output Current | 2000 | mA |
| Efficiency Level Mark | V | |
| Energy Star Qualified? | N.A | |
| Manufactured Date | N.A | |

Comments: Ambient temperatures:26.0 dec.
 Test equipment list: Please attachment

Tier 1 Standards

| | |
|---|---|
| Minimum Average Efficiency in Active Mode: | |
| < 1 Watt | 0.48 * Nameplate Output+0.14 |
| ≥ 1 to ≤ 51 Watts | 0.063 * Ln (Nameplate Output) + 0.622 |
| > 51 Watts | 0.87 |
| Maximum Energy Consumption in No Load Mode: | |
| 0 to ≤ 51 Watts | 0.3 W |
| 0 to > 51 Watts | 0.5 W |
| Test Method: ERP Test Method for Calculating the Energy Efficiency of Single-Voltage | |
| ERP Effective Date: | Manufactured On or After 04/27/2010 |

Tier 1 Standards for This Power Supply

| | |
|--|-------------|
| Rated Output Power (Voltage x Current): | 116.00 W |
| Maximum Energy Consumption - No Load: | 0.5 W |
| Minimum Average Efficiency in Active Mode: | 0.870 87.0% |

| 230 VAC / 50 Hz External Power Supply Results Summary | | | | |
|--|-----------|-----------|-----------|---------|
| | Sample #1 | Sample #2 | Sample #3 | Average |
| 100% Load Efficiency | 90.38% | 90.72% | 90.22% | 90.4% |
| 75% Load Efficiency | 88.62% | 88.70% | 88.23% | 88.5% |
| 50% Load Efficiency | 87.94% | 87.67% | 86.62% | 87.4% |
| 25% Load Efficiency | 87.71% | 87.39% | 86.90% | 87.3% |
| Average Active Mode Efficiency | 88.7% | 88.6% | 88.0% | 88.4% |
| No Load Input Power (W) | 0.49 | 0.49 | 0.48 | 0.49 |

This Power Supply Meets Tier 1 Efficiency Standards At 230VAC / 50Hz

Test Lab: Usai Technology Services Co., Ltd. **Date:** 2009-12-30
Technician: Harry.chen

Sample #1 Test Results - 230 VAC / 50 Hz

| Output Measurements | AC Input Measurements |
|---|--|
| Load Condition #1: 100% | |
| Set Output Current to 2000 mA Min Output Current 1960 mA Max Output Current 2040 mA Measured Output Current 2000 mA Measured Output Voltage 58.67 V Calculated Output Power 117.34 W | Measured Input Power 129.83 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.865 Total Harmonic Distortion (THD) % Calculated Power Consumed 12.49 W Calculated Efficiency (Ouput/Input) 90.38% |
| Load Condition #2: 75% | |
| Set Output Current to 1500 mA Min Output Current 1460 mA Max Output Current 1540 mA Measured Output Current 1500 mA Measured Output Voltage 58.68 V Calculated Output Power 88.02 W | Measured Input Power 99.32 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.853 Total Harmonic Distortion (THD) % Calculated Power Consumed 11.30 W Calculated Efficiency (Ouput/Input) 88.62% |
| Load Condition #3: 50% | |
| Set Output Current to 1000 mA Min Output Current 960 mA Max Output Current 1040 mA Measured Output Current 1000 mA Measured Output Voltage 58.70 V Calculated Output Power 58.70 W | Measured Input Power 66.75 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.823 Total Harmonic Distortion (THD) % Calculated Power Consumed 8.05 W Calculated Efficiency (Ouput/Input) 87.94% |
| Load Condition #4: 25% | |
| Set Output Current to 500 mA Min Output Current 460 mA Max Output Current 540 mA Measured Output Current 500 mA Measured Output Voltage 58.71 V Calculated Output Power 29.36 W | Measured Input Power 33.47 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.717 Total Harmonic Distortion (THD) % Calculated Power Consumed 4.12 W Calculated Efficiency (Ouput/Input) 87.71% |
| Average Active Mode Efficiency: 88.7% | |
| Sample #1 Meets The Tier 1 Active Efficiency Standard | |

| Load condition #5: No Load | AC Input Measurements |
|--|---|
| Set the Output to No Load | Measured Input Power 0.49 W Measured Input Voltage 230 VAC Measured Frequency 50 Hz True Power Factor 0.012 Total Harmonic Distortion (THD) % |
| Sample #1 Meets The Tier 1 No Load Standard | |

Sample #2 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|--------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 129.91 W |
| Min Output Current | 1960 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2040 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.870 |
| Measured Output Voltage | 58.93 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 117.86 W | Calculated Power Consumed | 12.05 W |
| | | Calculated Efficiency (Output/Input) | 90.72% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 1500 mA | Measured Input Power | 99.67 W |
| Min Output Current | 1460 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1540 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1500 mA | True Power Factor | 0.850 |
| Measured Output Voltage | 58.94 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 88.41 W | Calculated Power Consumed | 11.26 W |
| | | Calculated Efficiency (Output/Input) | 88.70% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 67.24 W |
| Min Output Current | 960 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1040 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.796 |
| Measured Output Voltage | 58.95 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 58.95 W | Calculated Power Consumed | 8.29 W |
| | | Calculated Efficiency (Output/Input) | 87.67% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 500 mA | Measured Input Power | 33.74 W |
| Min Output Current | 460 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 540 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 500 mA | True Power Factor | 0.723 |
| Measured Output Voltage | 58.97 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.49 W | Calculated Power Consumed | 4.26 W |
| | | Calculated Efficiency (Output/Input) | 87.39% |
| Average Active Mode Efficiency: | | 88.6% | |
| Sample #2 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.49 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.012 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #2 Meets The Tier 1 No Load Standard | | | |

Sample #3 Test Results - 230 VAC / 50 Hz

Output Measurements

AC Input Measurements

| | | | |
|--|----------|--------------------------------------|---------------|
| Load Condition #1: 100% | | | |
| Set Output Current to | 2000 mA | Measured Input Power | 129.95 W |
| Min Output Current | 1960 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 2040 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 2000 mA | True Power Factor | 0.875 |
| Measured Output Voltage | 58.62 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 117.24 W | Calculated Power Consumed | 12.71 W |
| | | Calculated Efficiency (Output/Input) | 90.22% |
| Load Condition #2: 75% | | | |
| Set Output Current to | 1500 mA | Measured Input Power | 99.69 W |
| Min Output Current | 1460 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1540 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1500 mA | True Power Factor | 0.855 |
| Measured Output Voltage | 58.64 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 87.96 W | Calculated Power Consumed | 11.73 W |
| | | Calculated Efficiency (Output/Input) | 88.23% |
| Load Condition #3: 50% | | | |
| Set Output Current to | 1000 mA | Measured Input Power | 67.72 W |
| Min Output Current | 960 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 1040 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 1000 mA | True Power Factor | 0.798 |
| Measured Output Voltage | 58.66 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 58.66 W | Calculated Power Consumed | 9.06 W |
| | | Calculated Efficiency (Output/Input) | 86.62% |
| Load Condition #4: 25% | | | |
| Set Output Current to | 500 mA | Measured Input Power | 33.77 W |
| Min Output Current | 460 mA | Measured Input Voltage | 230 VAC |
| Max Output Current | 540 mA | Measured Frequency | 50 Hz |
| Measured Output Current | 500 mA | True Power Factor | 0.725 |
| Measured Output Voltage | 58.69 V | Total Harmonic Distortion (THD) | % |
| Calculated Output Power | 29.35 W | Calculated Power Consumed | 4.43 W |
| | | Calculated Efficiency (Output/Input) | 86.90% |
| Average Active Mode Efficiency: | | 88.0% | |
| Sample #3 Meets The Tier 1 Active Efficiency Standard | | | |

| | | | |
|--|--|---------------------------------|---------|
| Load condition #5: No Load | | AC Input Measurements | |
| Set the Output to No Load | | Measured Input Power | 0.48 W |
| | | Measured Input Voltage | 230 VAC |
| | | Measured Frequency | 50 Hz |
| | | True Power Factor | 0.013 |
| | | Total Harmonic Distortion (THD) | % |
| Sample #3 Meets The Tier 1 No Load Standard | | | |

| Attachment (Contains) | |
|--------------------------|---------|
| Cover page: | 1 page |
| Label: | 1 page |
| Model list and rating | 2 page |
| Photo-documentation: | 2 page |
| Equipment List | 1 page |
| Total: | 7 pages |

Label Drawing



Type nomenclature:

FYXXXYYYY series, Input: 100-240Vac, 50/60Hz, 2.5A

I) XXX: Three digits, from 030 to 580 indicates the output voltage in volt when divided by 10,

II) YYYYY: Four digits, from 0300 to 7500 indicates the output current in Ampere when divided by 1000.

The EUTs are desk-top type switching power supply intended to use for information technology equipments.

Table A (Models list)ao

- 1) If XXX=030, YYYYY should be 0300, 0400, 0500, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 2) If XXX=042, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 3) If XXX=050, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 4) If XXX=060, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 5) If XXX=075, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 6) If XXX=085, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 7) If XXX=090, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 8) If XXX=100, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 9) If XXX=120, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 10) If XXX=126, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000, 7500
- 11) If XXX=135, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000
- 12) If XXX=150, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000, 7000
- 13) If XXX=160, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 3750, 4000, 5000, 6000
- 14) If XXX=170, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000
- 15) If XXX=180, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000, 6000
- 16) If XXX=190, YYYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 3150, 4000, 4750, 5000, 6000

- 17) If XXX=210, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 3000, 4000, 5000
- 18) If XXX=240, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000
- 19) If XXX=255, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500
- 20) If XXX=290, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000, 3500, 4000
- 21) If XXX=300, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000, 3500,
- 22) If XXX=340, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000
- 23) If XXX=360, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000
- 24) If XXX=380, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 3000
- 25) If XXX=425, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 2800
- 26) If XXX=430, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 2700
- 27) If XXX=440, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500, 2700
- 28) If XXX=450, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500
- 29) If XXX=460, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500
- 30) If XXX=480, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2500
- 31) If XXX=510, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000, 2200
- 32) If XXX=550, YYYY should be 2000
- 33) If XXX=580, YYYY should be 0300, 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1500, 2000



Fig. 1 – Top Overall view



Fig. 2 – Bottom Overall view



Fig. 3– Internal View

Equipment List

| Usai Ref. | Equip. name | supplier | type | serial no | rating | Uncertainty | last cal. | due to |
|-----------|-------------------|----------|-------------|-----------|--|---|------------|------------|
| E041 | Digit Multi-meter | FLUKE | 112 | 85090126 | 1V-400Vdc/ac 0.05-9.5Adc 1-400Vac 0.05-9.5Aac 1Ω-1MΩ | Udc=0.09%,Uac=0.11%, Iac=0.15%, Idc=0.27%, R=0.30%,K=2 | 2009-6-29 | 2010-6-28 |
| E042 | Digit Multi-meter | FLUKE | 112 | 85080438 | 1V-400Vdc/ac 0.05-9.5Adc 1-400Vac 0.05-9.5Aac 1Ω-1MΩ | Udc=0.09%,Uac=0.11%, Iac=0.15%, Idc=0.27%, R=0.030%,K=2 | 2009-12-25 | 2010-12-24 |
| E052 | Digit Multi-meter | FLUKE | 112 | 86410324 | 1V-400Vdc/ac 0.05-9.5Adc 1-400Vac 0.05-9.5Aac 1Ω-1MΩ | Udc=0.09%,Uac=0.15%,Iac =0.11%, Idc=0.27%, R=0.03%,K=2 | 2009-2-21 | 2010-2-20 |
| E058 | Power meter | WeiBo | PF12 0E | 187552 | 1-300V,0.02-2.00-15.00A, 0.1-4500W;50-60Hz | U=0.09%,I=0.10%, P=0.30%, F=0.042% K=2 | 2009-4-18 | 2010-4-17 |
| E068 | Power meter | Ainuo | AN87 01A | 078707151 | 0-300V; 0-2.00A; 0-600W | U=0.09%,I=0.10%, P=0.30%, F=0.04% K=2 | 2009-11-21 | 2010-11-20 |