MEI SHENG KANG POWER TECHNOLOGY(HK).,LTD SPECIFICATION FOR APPROVAL

AC/DC POWER ADAPTER

CUSTOMER SPEC: INPUT 100-240V AC 50/60HZ OUTPUT 5V 1A

CUSTOMER PART NO:

MSK PARTNO: <u>MSK-W05-01</u>

SAMPLE NO:______DATE: 2006-05-18

| CUSTOM ER | | | |
|--------------------------------|--|--|--|
| PROVED BY CHECKED BY TESTED BY | | | |
| | | | |
| | | | |

| MANUFACTURER | | | |
|--------------|--------|-----------|-------------|
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| | SWITCHING POWER SUPPLY SPECIFICATON (CLASS B) | | |
|--------------------------------------|-------------------------------------------------|---------------|--|
| MSK POWER TECH(HK) LIMITED | MSK TECH P/N: | CUSTOMER P/N: | |
| 美盛康电源科技(香港)有限公司 | MSK-W05-01 | | |
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1 GENERAL

Description

This specification defines the performance characteristics for a class II adapter, single-phase 12W. single output level power supply. simple design philosophy. overload latch-off protection during either(a) specified power threshold requirements or (b) short circuit condition.

Reliability level of 10-50K hours MTBF and 0.6% annual field failure rate@25°C.

DC output voltage must be safe extra low (SELV) and limited power as defined by IEC 60950 3rd edition. The maximum room ambient temparature, as mentioned in clause 1.4.12 of IEC 60950 3rd edition, for the external power supply is 40° C.

Cooling: Natural convection/fan convection.

2 INPUT REQUIREMENTS

Input conditions

The supply shall operate over the voltage ranges as follows:

| Rated input Voltage | 100-240V AC | |
|--------------------------------|------------------------------------------------------------|--|
| Operating range | 90-264V AC | |
| Rated input frequency | 50/60HZ+/-3HZ | |
| Rated input current | 0.09A Max | |
| Maximum input power | 7.1W | |
| Input current (No Load) | ≦10MA | |
| Power consumption (No Load) | 0.30W Max | |
| Primary current protection | An adequate internal fuse on the AC input line is provided | |
| Configuration | 2 Conductor | |

ACinrush current

Peak inrush current shall be limited to 60A for a cold start. Under both cold and warm start conditions, there shall be no immediate damage or long-term impact on the reliability of the supply. The conformance test for this requirement shall be performed at +12% of the rated input voltage. Voltage and current waveforms will be observed on an oscilloscope following closure of the external power switch. Switch closure will be repeated until the waveforms show closure coincident with a voltage peak. The current measured during this occurrence will be defined as the peak inrush current.

3 OUTPUT REQUIREMENTS

| Nominal DC output voltage | +5.0V |
|---------------------------|-------|
| Minimum load current | 0.01A |
| Rating load current | 1A |

| Peak load current | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rating output power | 5W |
| Line regulation | The line regulation is less than $\pm 5\%$ while measurin at rated load and $\pm 10\%$ of input voltage changing. |
| Load regulation | The load regulation for +5.0V is less than $\pm 5\%$ at measured output load from 10% to 100% rated load. |
| Peak load regulation | The peak load regulation for +5.0V is less than, a measured output load from 30% to 100% rated load. |
| Ripple & noise | At 20MHZ, output parallel with a 100UF ceramic capacitor and a 10UF electrolytic capacitor to ground temparature at 25°C, nominal AC input voltage. |
| | 70% Minimum |
| Switching efficiency | At nominal input voltage and full load |
| Turn on delay time | 2000 MS at nominal input AC voltage and full load |

| Rise time | The supply shall have a start-up rise time of less than 20MS to rise to within regulation limits for all DC output | |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|--|
| Hold up time | 10MS minimum at nominal input AC voltage and full load | |
| Output over-shoot | Less than 8% of nominal voltage value | |
| Temparature coefficient | Output voltage temparature coefficient \pm 00.5%/°C | |
| LED indication function | No Available | |
| Protection function | Available | |
| Over-voltage protection | 16V max, the output voltage shall be clamped by internal protection æner | |
| Short-circuit protection | The adapter will not be damaged and with auto recovery function by short the DC output to ground | |
| Over-current protection | The power unit will be protected when output power at 110-200% of all rated DC output | |

4 MECHANICAL

Enclosure and layout Plastic case: Weight: <u>65</u>G Max Dimension: 76*42*29 mm Color: black Input and output configuration Input pin: EU pin Output connector: DC plug type 5.5*2.1*12 Polarity: center + Cord 1.2m VW-1 2468 80°C 300V 22AWG 2C Black + White (core) (No lead)

5 REGULATORY COMPLIANCE

Safety requirement and certificates

Regulatory standard

The power unit will comply the following international regulatory standards

| Safety authority | Country | Certified status | standards |
|------------------|-------------------|------------------|-----------------|
| UL | The united states | | UL-60950 |
| CSA | Canada | | ETL-60950 |
| TUV/GS | German | Pass | TUV/VDE-EN60950 |
| СЕ | Europe | Pass | CE Mark |
| PSE | Japan | | J-60950 |
| EK | South korea | | EK-60950 |
| CCC | China | pass | GB4943 |
| UK | Britain | | EN60950 |

Additionalsafety requirements

Dielectric withstand voltage, primary input AC short to secondary output DC short:1,500V AC, 5MA,

1 Minute.

Insulation resistance, input to output:10M Ω at 500 V DC.

Reinforced insulation system, primary to ground and primary to secondary.

The leakage current will not exceed 0.25MA.

6 ENVIRONMENT REQUIREMENTS

Temparature

Operating: between 0 $\,^\circ\!\mathrm{C}\,$ and 40 $\,^\circ\!\mathrm{C}\,$

Non-operating: between-20 $\,\,^\circ\!\mathrm{C}\,$ and +80 $\,\,^\circ\!\mathrm{C}\,$

Hum id ity

Operating: between 10% and 90%

Non-operating: between 10% and 90%









