

SPECIFICATION

Open Frame Switching Power Supply

Universal AC Input 10W 5VDC Output



P/N: N1005RH-5

**** Specification Approval****

This specification (including cover page) is approved in it's entirety by:

Company Name

Print Name

Signature

Date

Specification subject to change without prior notice.



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1. Description

This datasheet applicable to the switching power adapter model no.: N1005RH-5

2. Input

2.1 Input Voltage:

Rated voltage: AC 100~240V

Tolerance: AC 90~264V

2.2 Input Frequency:

Rated Frequency: 50/60Hz

Tolerance: 47~63Hz

2.3 Input Current:

When rated input voltage and full load, maximum input AC current is: 1.5A.

2.4 Surge Current:

Maximum surge current is 50A with rated output and environmental temperature 25°C (rated input, cold start).

2.5 Maximum AC leakage current for input to output:

Maximum leakage current shall not exceed 0.25mA when input is AC240V

2.6 When input is AC 115/230V 60/50Hz, standby power consumption is less 0.3W.

3. Output

3.1 Output Parameters:

Output Voltage	Min Loaded	Rate Output current	Rated Output power
DC 5 V \pm 10%	0.01A	1A	5W

3.2 Loaded Characteristics, regulating

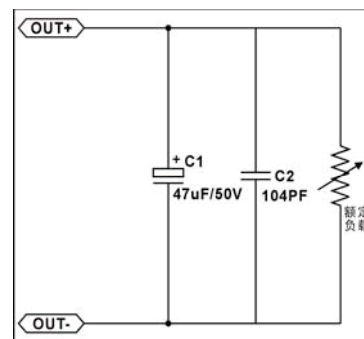
Linear regulating	\pm 3%	Loaded regulating	\pm 5%
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3.3 Ripple and Noise:

Testing condition: Ripple voltage and noise must be measured at each output pin of the connector while the output is decoupled by a high-frequency 0.1 μ F capacitor. The measurement bandwidth must be 0 to 20 MHz.see the drawing belows:

Test device:oscilloscope TD01022A(25MHz)

Maximum ripple/noise	\leq 100mV
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3.4 Startup Time:

Maximum starting time is 3S when input is AC100V and full load

3.5 Rise Time:

Maximum time is 100mS, when input is AC100V and full load.

3.6 Hold Up Time:

Minimum hold up time is 10mS, when AC100V input, and full load

3.7 Compliant with CEC 5 at AC 115/230V 60/50Hz and output max rated.

3.8 Compliant with FCC Part 15 Subpart B Rules.

3.9 Dynamic Load Response:

Test conditions: The power supply accessory must be subjected to 500 mA load increases and decreases

Power supplies that furnish 1 A must also be subjected to load increases and decreases between 80 mA and 1 A. In all tests the load slew rate must not be less than 100 mA/μsec.

With a decoupling capacitor of 10 μF and an ambient temperature of 25 °C, the power supply accessory output, as measured at the dock connector, not undershoot below 4.70V or overshoot above 5.25V.

4. Protection

4.1 Overload Protection:

Overloads applied to the power supply output, at a rate faster than 100 mA/μsec, should cause the output to disconnect before they cause damage to the accessory or the Apple device, and the output should remain disconnected until the overload is removed. This design goal for overload protection also applies to any single fault condition. It must not be possible for a power supply to provide more than 2.5 A RMS in any overload situation.

4.2 Output Short Circuit Protection:

The output of the power supply accessory should drop or fold back if its output is shorted to the secondary common, and no damage should result. A short circuit is defined as less than 10 milliohms resistance.

4.3 Output Over Current Protection:

When output overload, adapter enter into protection mode, and can normally work after trouble shooting.

4.4 Output Over Voltage Protection:

Taking into account the delay time of the overvoltage protection circuit, no single-point fault should be able to cause a sustained overvoltage condition on the power supply output. The power supply should provide a latch-mode overvoltage protection circuit that resets itself within 30 seconds. Optionally, a power off/on cycle could restore normal operation. An overvoltage fault can be simulated by opening the feedback loop that regulates the output voltage. A voltage greater than 6.3 V must not be possible during a single-point failure.

5. Environmental

5.1 Operating temperature:

0°C ~ 40°C, full load, operation is normal

5.2 Storage Temperature:

-20°C ~ 70°C or 0°C ~ 60°C (with enclosure)

5.3 Relative humidity:

20% ~ 90%, 72hours, full load, operation is normal

6. Safety

6.1 Hi-pot Test:

Reference standard: IEC 384-14:1993

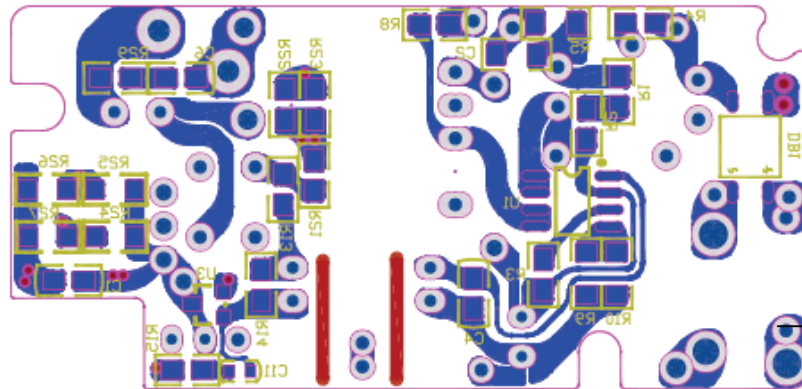
Primary to secondary: AC 1750V 5mA/60S

6.2 Insulation Resistance:

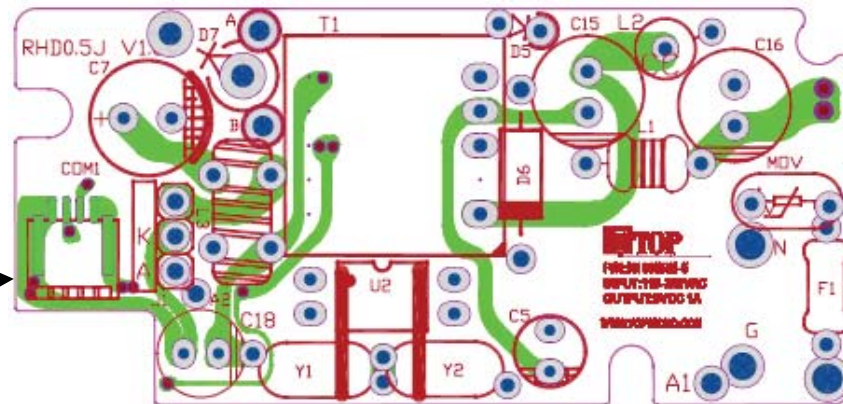
Primary to secondary: 100MΩ min at 500V DC.

7. PCB Diagram

Dimension: 60.9*28.8*1.6mm



Input: AC100-240V
50/60Hz



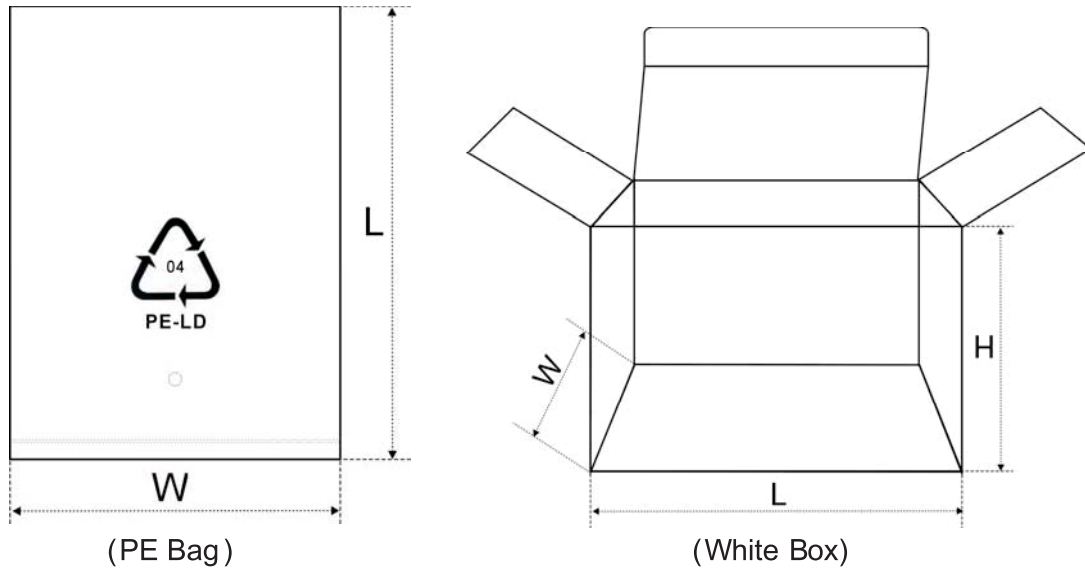
Output: DC5V 1000mA

10. Test Report

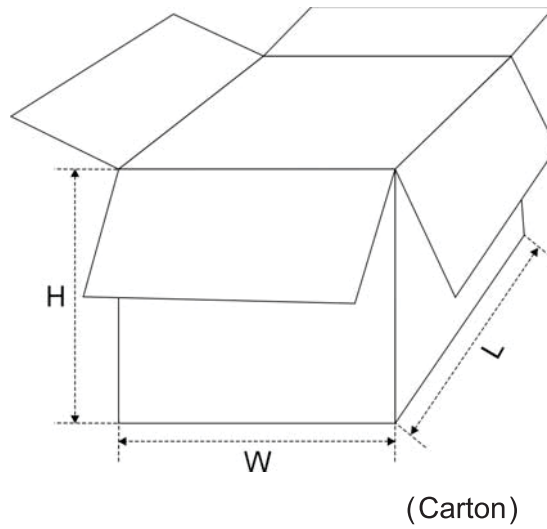
Testing device: frequency conversion device: 9805-500W, Electronic load instrument 3302C, Digital Multimeter FLUKE.17B, PF403C Transformer power measuring instrument

Testing Item	Testing condition	Testing requirement	Testing data					Unit	Judge
			1	2	3	4	5		Pass/Fail
Output Voltage	Input AC100V 60Hz no load	±10%	5.05	5.08	5.03	5.07	5.04	15.1	Pass
Output Voltage	Input AC100V 60Hz rate current	±10%	5.02	5.05	5.00	5.04	5.01	V	Pass
Ripple&noise	Input AC100V 60Hz Full load	≤100mV	82	80	85	78	77	mV	Pass
Output Voltage	Input AC240V 50Hz no load	±10%	5.05	5.08	5.03	5.07	5.04	V	Pass
Output Voltage	Input AC240V 50Hz rate current	±10%	5.02	5.05	5.00	5.04	5.01	V	Pass
Ripple&noise	Input AC240V 50Hz full load	≤100mV	92	90	95	88	87	mV	Pass
Standby consumption	Input AC115/230V 60/50Hz	less than 0.3W	0.20	0.18	0.20	0.18	0.18	W	Pass
Shorted circuit(10Min.)	Input AC100-240V 50/60Hz no load	no smoke,no fire, no twist, no over heat	OK	OK	OK	OK	OK		Pass
Hi-Pot	Test/Safety standard:IEC 384-14:1993 (voltage start from 0v at less 150V/S to test voltage)	input to output :AC1750V 5mA/60S	OK	OK	OK	OK	OK		Pass
Burn in test	Input AC100V 60Hz full loaded 24hours		OK	OK	OK	OK	OK		Pass

11. Dimensions (mm)



Name	Material	Dimension	Qty	Remark
Pe Bag	PE	$L*W = (100+40)*145\text{mm}$	1pcs	Anti-static bubble bag
Pe Bag	400g	$L*W*H = 80*30*62\text{mm}$	1pcs	



Name	Material	Dimension	Remark
Carton	K:A	$L*W*H = 39*29*20\text{cm}$	120pcs/Carton