

1.0 SCOPE

This document describes the electrical, mechanical, environmental and RoHS correspondence lead free-ization specification of MPC(Wall mount)C14 type single output 12VDC 1.5A switching adaptor.

The elimination (containment regulation value within) of the containment regulation substance.

2.0 INPUT SPECIFICATION

2.1 Input Voltage and Frequency

The power supply shall meet all specification below when powered from following sources.

Voltage Range	Line Frequency	Min. Voltage	Max. Voltage
100~240VAC	47~63Hz	90VAC	264VAC

Table 2.1.1

2.2 Current

The maximum input current is 0.65A at 120Vac.

2.3 AC Inrush Current

The peak inrush current shall be limited to 30A at 100Vac input for a cold start at 25 °C.

2.4 Stand By Power

The maximum input power is 0.5W MAX. at inupt 115/230VAC and no load

3.0 OUTPUT SPECIFICATION

3.1 Output Voltage (Load regulation)

The power supply shall be statically regulated for load.

Load	Min.Load	Full.Load
Current	50mA	1.5A
Voltage	12VDC±5%	12VDC±5%

Table 3.1.1

3.2 Line regulation

The line regulation is less than 1%.

3.3 Ripple and Noise

output 1	Voltage	Max.peak to peak ripple&noise
Vo	12VDC	120mV

Table 3.1.3

Measuring is done by 20MHz bandwidth oscilloscope and terminated each output with a 10uF capacitor and a 0.1uF capacitor.

3.4 Efficiency

3.4.1 The minimum efficiency shall be XXX typically at XXXVac input and rated load.

3.4.2 The average efficiency shall be 76.01% MIN,at 115/230VAC and 4conditions load.(25%.50%.75%.100%)

Meet CEC level IV.

3.5 Hold up time

The hold up time shall be longer than 10ms at 120Vac input and rated load.

3.6 Temperature coefficient

$\pm 0.05\%/^{\circ}\text{C}$ typical on all output.

3.7 Turn on / off delay

During turn on and turn off, no voltage shall exceed its nominal voltage by more than 10% and no output will change its polarity with respect to its return line. All output shall reach their steady state values within 2S of turn on.

3.8 Transient Response and Deviation

The power supply will meet all specifications and maintain output voltage regulation within 5% of nominal with up to a current change of 50% of maximum current in load for the output #1.

3.9 Indicator

The power supply is designed NO LED indicator to indicate the power output in its normal condition.

4.0 PROTECTION REQUIREMENT

4.1 Over – voltage protection

The power supply shall shutdown all output when output voltage reaches to its over – voltage protection trigger point of 15.6 V.

4.2 Short circuit protection

No damage to the power supply shall be sustained when operating any output under any line condition, into a short circuit condition for an indefinite period of time. The power supply shall be self – recovering when fault condition remove.

4.3 Overshoot

At turn on, the output voltage shall not exceed steady stage by more than 10%.

4.4 Over current Protection

The maximum output power shall be limited to 110-260%

5.0 RELIABILITY

Calculated MTBF shall exceed 50,000 hours at maximum load and 25 °C ambient in accordance with MIL-STD-HDBK-217.

6.0 ENVIRONMENTAL CONDITIONS

6.1 Operating

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions.

6.1.1 Ambient Temperature: 0°C ~ 50°C

6.1.2 Relative Humidity: 20% ~ 90%

6.1.3 Altitude : Sea level to-100 ~ 10,000 feet.

6.1.4 Vibration: 1.0mm, 10 –25Hz, 15 minutes per cycle for each axis (X, Y, Z)

6.2 Storage

The power supply shall be capable of with standing the following **environmental conditions** extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies:

6.2.1 Ambient Temperature: -20°C ~ 80°C

6.2.2 Relative Humidity: 10% ~ 90%

6.2.3 Sea level to-100 ~ 10,000 feet

6.2.4 Vibration and Shock:

The power supply shall be designed to with stand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.

7.0 DIELECTRIC WITHSTAND SPECIFICATION

7.1 Hi-pot test

Shall withstand without breakdown 1800VAC 5mA 3Sec between AC plug to DC plug and case. Under leakage current 5mAmax.

7.2 Insulation Resistance

500 VDC 100 Mega Ohms min. Between AC plug and DC plug and case.

8.0 INTERNATIONAL STANDARTS

The power supply has been designed to meet following safety standard

8.1 EMI standards

The power supply meets the radiated and conducted emission requirements for FCC part 15 CLASS B, EN55022 CLASS B.

8.2 EMS standards

The power supply meet below standard

ESD:Contact > 4KV,Air>8KV meet IEC 61000-4-2

RS:Frequency 80MHZ~1.0GHz,Field Strenght 3V/M,meet IEC61000-4-3

EFT:1.0KV on input ac power ports.meet IEC61000-4-4

SURGE: Line to line:+/-1KV(peek),meet IEC61000-4-5

Line to earth(ground):+/-2KV(peek),meet IEC61000-4-5

8.3 Safety

The power supply has been designed to meet or certified under following standard

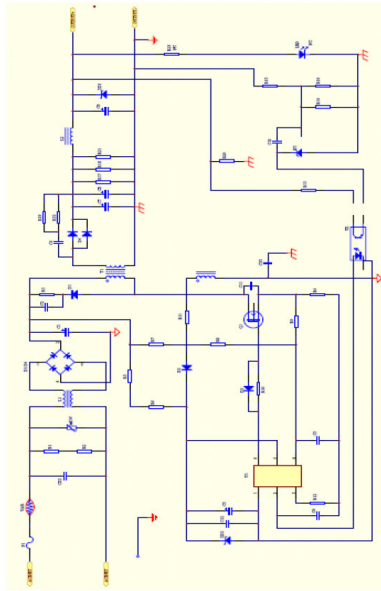
	Certified	Standard
UL-CUL	APPROVED	UL60950
CE	SELF DECLARATION	EN55022/EN60950

9.0 Product life Warranty

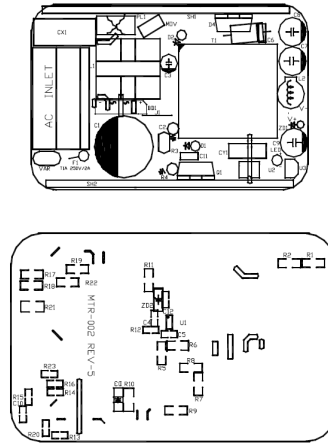
Mitra warrants this product against defects in materials and workmanship under normal use for a period of EIGHTEEN (18) MONTH, which accordance to date code of the product ("Warranty Period"). If a hardware defect arises and a valid claim is received within the Warranty Period, at its option, Mitra will either (1) repair the defect at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

10.0 WEIGHT

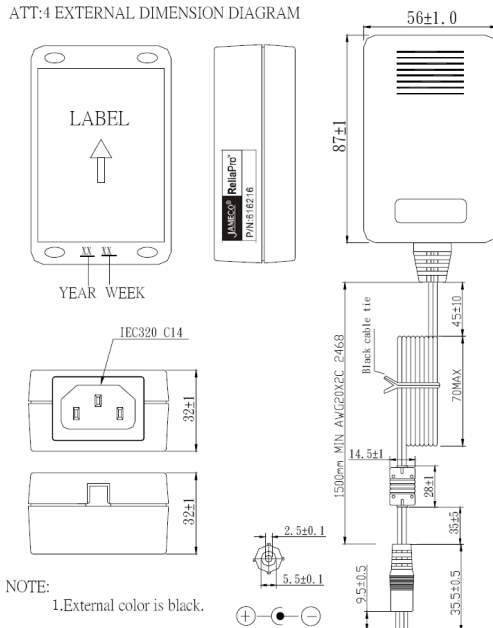
The unit weight is about XXXa. exclude packing.



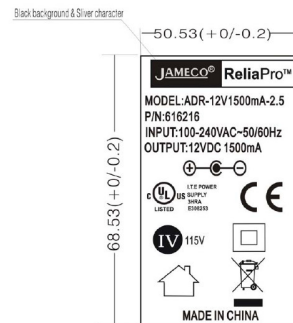
ATT:2 COMPONENT LAY OUT DRAWING



ATT:4 EXTERNAL DIMENSION DIAGRAM



ATT:3 LABEL



NOTE:

- 1.Material:PET t=0.26+/-0.2mm, 80°C,UL materials.
- 2.Label have adhere:750g/4cm². Surface layer fog.
- 3.Silver background & Black character.