

AC / DC Power Adapter



RoHS
Compliant



Input Characteristics

Input Voltage & Frequency

The range of input voltage is from 90V AC to 264V AC with a single phase.

Rating Voltage : 100V AC ~ 240V AC

Input Frequency : 60Hz/50Hz

Minimum Voltage : 90V AC

Maximum Voltage : 264V AC

Input AC Current/AC

0.45Amax @ 100 ~ 240V AC input and Full load

Inrush Current (cold start)

The inrush current will not exceed 60A at 100 ~ 240V AC input and Max load for a cold start at 25°C.

Average Efficiency

While input 115V AC and 230V AC, the average efficiency is more than 78.7%. The test point is at 25%, 50%, 75% and 100% of max load respectively.

Energy Consumption

While input 115V AC or 230V AC and the output is no load, the input power loss must be less than 0.1W

Output Characteristics

Static Output Characteristics <Vo & R+N>

| Output | Rated Load | | Output Range | R+N |
|--------|------------|-----------|--------------|----------|
| | Rate | Min. Load | | |
| +5V | 0A | 2A | 4.7V ~ 5.3V | 150mVp-p |

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (Test under the condition of rated input and rated output)

Line/ Load Regulation

| Output | Load Condition | | Line Regulation | Load Regulation |
|--------|----------------|-----------|-----------------|-----------------|
| | Rate | Min. Load | | |
| +5V | 0A | 1A | ±3% | ±5% |

Turn - on Delay Time

3S max. @ 100V AC to 240V AC input & Full load

Hold-up Time

5mS min. @ Full load & 115V AC/60Hz input turn off at worst case

Capacitance Load

While input 100 ~ 240V AC and capacitance load is 470 μ F, the adapter can turn on normally and the output is in the rated range.

Output Overshoot / Undershoot

10% max. When the power on or off

Output Load Transient Response

The output shall not exceed 10% of the nominal output voltage, load fluctuation: from 20% to 80%, R/S: 0.5A/ μ S, frequency: 100Hz duration and 8mS at 80%.

Environment Requirements

Operating Temperature and Relative Humidity

0°C to +45°C

10%RH to 90%RH

Storage Temperature and Relative Humidity

-20°C to +80°C

5%RH to 95%RH non-condensing @ Sea level shall be low 10,000 feet

Vibration

10 to 300Hz sweep at a constant acceleration of 1.0G (Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z

Drop in

Height: 1m; the product should be fell off on the plank with the thickness of at least 53mm, and the plank should be put on the cement ground or on the ground without flexibility. Random surface in all 3 times.

Protection Requirements

Over Current Protection

Over Current Point Limited : $I > 2.2A$

The output shall hiccup when the over currents applied to the output rail, and shall be self-recovery when the fault condition is removed

Short Circuit Protection

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed

Over Voltage Protection

The power supply shall protection when the output over voltage

Reliability Requirements

Burn-in

The power supply shall be burn-in at least 4 Hours under normal input and 80% rated load at 40°C \pm 5°C

MTBF Qualification

The MTBF shall be at least 50,000 hours at 25°C, Full load and nominal input condition

AC / DC Power Adapter



Safety Standards

Dielectric Strength(Hi-pot)

Primary to Secondary: 4242V DC / 5mA Max. / 60 second(3 seconds for mass production)

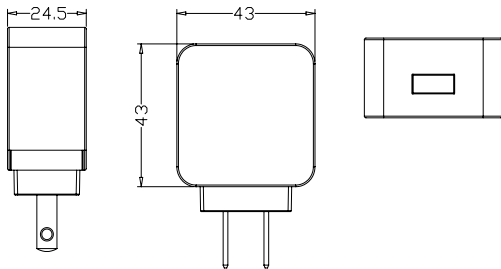
Leakage Current

0.25mA max. at 264V AC / 50Hz

Insulation Resistance

50MΩ min. at primary to secondary add 500V DC test voltage

Diagram



Dimensions : Millimetres

Part Number Table

| Description | Part Number |
|--|-------------|
| SMPS Adapter (Wall mount), USB Output, Input 100~240V AC 50/60Hz, Output 5V, 2A, Efficiency Level VI | MC002384 |

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