

SPECIFICATION

High-Quality Switching Power Adapter

Universal AC Input 200W 24VDC Single Output

P/N: A2400833ED1 RGT

*** Specification Approval ***

This specification (total 9 pages including cover page) in its entirety is approved by:

Company Name	Print Name	Signature	Date
--------------	------------	-----------	------

Specification subject to change without prior notice.



3261 Keller St.
Santa Clara, CA 95054
Tel: 408-980-9813
Fax: 408-980-8626
E-mail: infor@topmicro.com

CONTENTS

1-0 General Description

2-0. Input Requirements

3-0. Output Requirements

4-0. Environment

5-0. Safety

6-0. Mechanical Characteristics

1-0. General Description

The purpose of the document is to specify a Single phase AC input, single output switching power supply.

This product is AC to DC switching power transfer device, it can provide for a 24V, 8.33A max & 200W max DC output with constant voltage source.

This Specification defines the input, output, performance characteristics, environment, noise and safety requirement for a power supply.

2-0. Input Requirements

2-1. Input Voltage

Rated Voltage 100-240 Vac +/- 10% full range. Normal line input 110Vac/220Vac.

2-2. Input Frequency

47~63 Hz

2-3. Input Current

a. 4.0A (Max.) @ Rated AC input with full load.

b. 2.0A(Max.) @ Rated AC input with full load.

2-4. Efficiency

85% typical at normal line input and full load output

Meet CEC Level III Requirement.

2-5. Configuration

3-wire AC input (Line, Neutral, FG)

2-6. Input Fuse

The hot line side of the input shall have a fuse, rating (5.0A/250V)

2-7. Inrush Current

$\leq 50A$ at 110 Vac

$\leq 100A$ at 220 Vac At cold start, maximum load.

2-8. Line Regulation

This line regulation is less than $\pm 1\%$, of rated output voltage @ full load .

2-9. Hold Up Time

≥ 16 mSec, @ Normal line, with full load.

2-10. Rise Time

≤ 50 mSec , @ Rated AC input, with full load.
From 10% to 90% of output voltage.

2-11. Turn-ON Time

The output voltage should rise to 90% of rated output voltage
in less than 3 Sec , from AC apply to 110Vac start up.

2-12. Harmonic Standard and Power Factor

The adapter complied with IEC 61000-3-2 class D harmonic standard while input power
over than 75W. The P.F. shall >0.95 @100Vac input and >0.9 @240Vac input.

2-13. No Load Power Consumption.

Less than ≤ 0.75 Watts ., @ 230Vac / 50Hz.

3-0. Output Requirements**3-1. Output Voltage and Current**

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
+24V	0	8.33A

3-2. Load Regulation

Voltage (Vdc)	Tolerance (%)	Regulation (Vdc)
+24V	+/-5	22.8~25.2V 26.4V max @ 0A

3-3. Dynamic Load Regulation

+5% excursion for 50% - 100% or 100% - 50% load change of DC output at
any frequency up to 1KHz(duty 50%)

3-4. Ripple & Noise

The power supply shall not exceed the following limits on the indicated voltage for 60Hz or 50Hz ripple, Switching frequency ripple and noise and dynamic load variations measured with a 20MHz bandwidth

Output	Ripple/Noise
+24V	1.5% max. of rated output voltage

Ripple / Noise: 60Hz ripple + switching ripple and noise

Ripple & Noise are measured at the end of output cable which are added a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor

3-5. Over Voltage Protection

150% Max. of rated voltage.

The output voltage shall be shutdown and latched when OVP occurred.

3-6. Over Current Protection

110~150% of rated output current.

The adapter can withstand continuous short at DC output and no damage.

3-7. Stability

2% Max. at constant load with constant input (after 30 minutes of operation).

3-8. Temperature Rise

Less than 45°C on top/bottom case at normal AC input & 80% load of DC output at environment temperature 25°C.

3-9. Drop-out (Power Line Disturbance)

Output voltage shall remain within the specified regulation range, through the absence of a line input during 1/2 cycle, at full load and normal AC line input

3-10. Voltage Isolation

The DC ground will be isolated from the AC neutral and AC line.

4-0. Environment**4-1 Temperature**

- a. Operating : 0 to 40 °C
- b. Storage : -20 to 85 °C

4-2 Humidity

- a. Operating : 10 to 90 %
- b. Storage: 5 to 90 %

4-3 Altitude

From sea level to 10,000Ft (operation) and 40,000Ft (non operation)

5-0. Safety**5-1. Hi-Pot Test**

4242 Vdc 5mA 3 Sec. between primary and secondary circuit

5-2. Insulation Test

500Vdc, 3 Sec. between primary and secondary circuit

IR should \geq 50 M Ω

5-3. Leakage Current

\leq 750 uA, at 240Vac/50 Hz

5-4. Safety

UL, CUL, TUV, CE, FCC

5-5. EMS

Items	Specification	Reference
ESD	Contact: \pm 4KV	IEC 61000-4-2
	Air: \pm 8KV	
RS	Frequency: 1KHz Field Strength: 3V/M	IEC 61000-4-3
EFT	1.0 KV on input AC power ports.	IEC 61000-4-4
SURGE	Line to Line: \pm 1KV (peak)	IEC 61000-4-5
	Line to F.G : \pm 2KV (peak)	

5-6. EMI

Comply with Standards
CISPR 22, EN 55022 Class B

6-0. Mechanical Characteristics

6-1. Physical Size : 182 mm (L) * 80 mm (W) * 44 mm (H)

6-2. Enclosure material : 94V-1 minimum

6-3. Output Cable (Reference) : UL1571 #14

6-4. Vibration Test

The vibration frequencies are set at 20Hz, with total amplitude of 1.5mm
Along the 3 directions namely X-Y-Z. The each direction should be vibrated
for 60 minutes, after testing no abnormal electrical or mechanical should occur.

6-5. Drop Test (Referencing to CSA C22.2 No.950/UL1950/UL1310/EN60950)

Products shall be dropped from a height of 900 mm onto a horizontal surface
consists of hardwood at 13mm thick, mounted on two layers of plywood each
19mm to 20mm thick, all supported on a concrete or equivalent non-resilient
floor. Upon conclusion of test, the equipment need not be operational.

6-6. Net Weight (Reference) : 1000±10g



