

12J SMPSU 5V DC 2000mA 10-35-13 C-POS

T0520-13J



FEATURES

Wall mounted light weight and compact Switch Mode Power Supply Units with a wide 90V-264V AC input voltage range to suit travel product applications.

The narrow width allows two adaptors to be used in a standard double power outlet. Insulated active and neutral pins meet AS/NZS3112 for improved electrical safety.

Electrical Safety Authority Approved. Other voltages and choice of output plug can be custom made upon request.

INPUT CHARACTERISTICS

	MINIMUM	RATED	MAXIMUM
Input Voltage	90 V AC	100 - 240 V AC	264 V AC
Input Frequency	47 Hz	50 / 60 Hz	63 Hz
Input Current At 240 V AC Maximum Load			450 mA
Inrush Current At full-load 25°C Cold Start There shall not be any damage and the input fuse shall not blow	< 60 A		

PROTECTION CHARACTERISTICS

Over - Current Protection

The output voltage will drop when an over-current condition is applied to the output and there shall be self-recovery to the normal state when the over-current condition is removed (auto recovery)

> 2.2A and ≤ 5.0 A (Trip range at 240V AC 50 Hz)

Short - Circuit Protection

The adaptor's input power shall decrease when the output is short circuited and it shall be able to withstand this condition continuously without damage. There shall be self-recovery to the normal state when the fault condition is removed.

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OUTPUT CHARACTERISTICS

Output Voltage	5.0 V DC Nominal (Min. 4.75V DC - Max. 5.25V DC)
Maximum Load Current	2.0 A (Max)
Ripple and Noise Voltage measured p-p with a 20MHz bandwidth oscilloscope. The output is paralalled with a 10uF low ESR electrolyptic capacitor & a 0.1uF ceramic capacitor at rated input and full load condition.	120 m V
Output Overshoot / Undershoot When power is switched on and off at full load condition	20 % (Max)
Turn-On Delay	5 Seconds (Max)
Hold-Up Time At 230V AC 50Hz and maximum load	10 m S (Min)
Dynamic Response	The power supply shall maintain output transient response time within 10ms with a loading current change from 20% to 80% of maximum current and 0.5A/ μ s rise up or drop down tested at output terminals.

RELIABILITY

Mean Time Between Failure (MTBF)	When the power supply is operating within the limits of this specification the MTBF shall be at least 20,000 at 25°C (MIL_HDBK-217F)
Burn-In Test	The power supply shall withstand a minimum of 4 hours burn-in testing under full load at 35°C ~ 40°C + / - 5°C room temperature. After the test, the product shall operate normally

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MECHANICAL CHARACTERISTICS

Input Plug Type	Wall Type, AU-pin, 2 Conductors < Active, Neutral >
Output Cord	UL2464, 20 AWG * 2C, Black
Output Plug	10.0 (L) x 3.5 (D) x 1.35 (ID) mm
Drop Test	A sample is to be subjected to three impact tests by dropping from a height of 1000mm ± 10 mm onto a horizontal surface in positions most likely to produce the most adverse results. The horizontal surface consists of hardwood at least 13 mm thick, mounted on two layers of plywood each 19 mm to 20 mm thick, all supported on a concrete or equivalent non-resilient floor. The sample shall subsequently pass an electrical functional test and the case shall not be cracked.

ENVIRONMENTAL CHARACTERISTICS

	OPERATING	STORAGE
Temperature	0°C to + 40°C	- 30°C to + 70°C
Relative Humidity	10 ~ 90 %	
Altitude	Sea Level to 2,000m	
Vibration and Shock	1.0mm, 10 - 55 Hz 15 minutes per cycle for each axis (X, Y, Z)	The power supply shall be designed to withstand normal transportation vibration per MIL-STD_810D, method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.
Cooling	Natural Convection	

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SAFETY CHARACTERISTICS

Compliance Standard	AS / NZS60950
Insulation Resistance	> 10 M Ω at 500 V DC
Dielectric withstanding voltage test (Hi-Pot Test) Primary to Secondary	4242 V DC 5mA for 1 minute (sample) or for 3 seconds (production)
Leakage Current	< 0.25mA for Class II at maximum input voltage

ENERGY EFFICIENCY

No Load Power Consumption (230V AC 50Hz)	0.3W Max
Average Active Mode Efficiency This measurement should be after the UUT working in a stable state and the average efficiency should be measured at four active loads: 25%, 50%, 75% and 100% of the rated load.	> 73.36 %
International e Efficiency Level	V
Compliance	MEPS: AS / NZS 4665.1, AS / NZS 4665.2

This power supply complies with the Australian and New Zealand Energy Performance Requirements for external power supplies (MEPS:ASNZS 4665.1, AS / NZS 4665.2)

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SAFETY CHARACTERISTICS

Compliance Standard

AS / NZS CISPR22

The power supply shall meet the following EMS Standards:

EN61000-4-2 Electrostatic discharge (ESD) Immunity
Severity Level: Level 3, Air Discharge: ± 8 KV
Severity level 2, Contact Discharge: ± 4 KV
Performance Criterion: B

EN61000-4-3 RF field strength immunity
Radio-frequency Electromagnetic Field Susceptibility Test (RS), 80-1000MHz,
Severity Level: Level2, 3V/M
Performance Criterion: A

EN61000-4-4 Electrical Fast Transient / Burst (EFT) Immunity
Severity Level: Level 2, line to line: 1.0KV
Performance Criterion: B

EN61000-4-5 Surge Immunity
Severity Level: Level 2, line to line: 1.0KV
Severity Level: Level 3, line to earth: 2.0KV
Performance Criterion: B

EN61000-4-6 Conducted Disturbances Immunity
Conducted Radio Frequency Disturbances Test (CS), 0.15-80MHz,
Severity Level: Level 2, 3V(rms), Modulation signal 1kHz 80% AM
Performance Criterion: A

EN61000-4-8 Magnetic Field Immunity
Severity Level: level 1, 1A/M
Performance Criterion: A

EN61000-4-11 Voltage Dips and Short Interruption Immunity
Voltage Dips and Short Interruption: 30%, 60%, >95%

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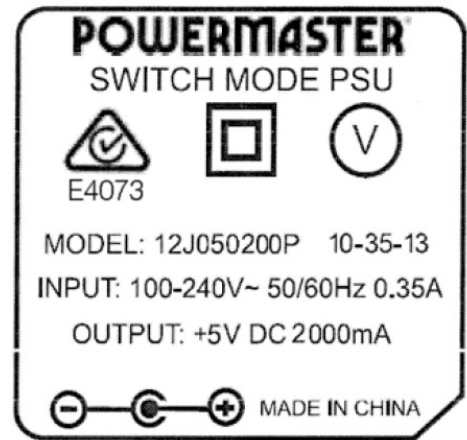
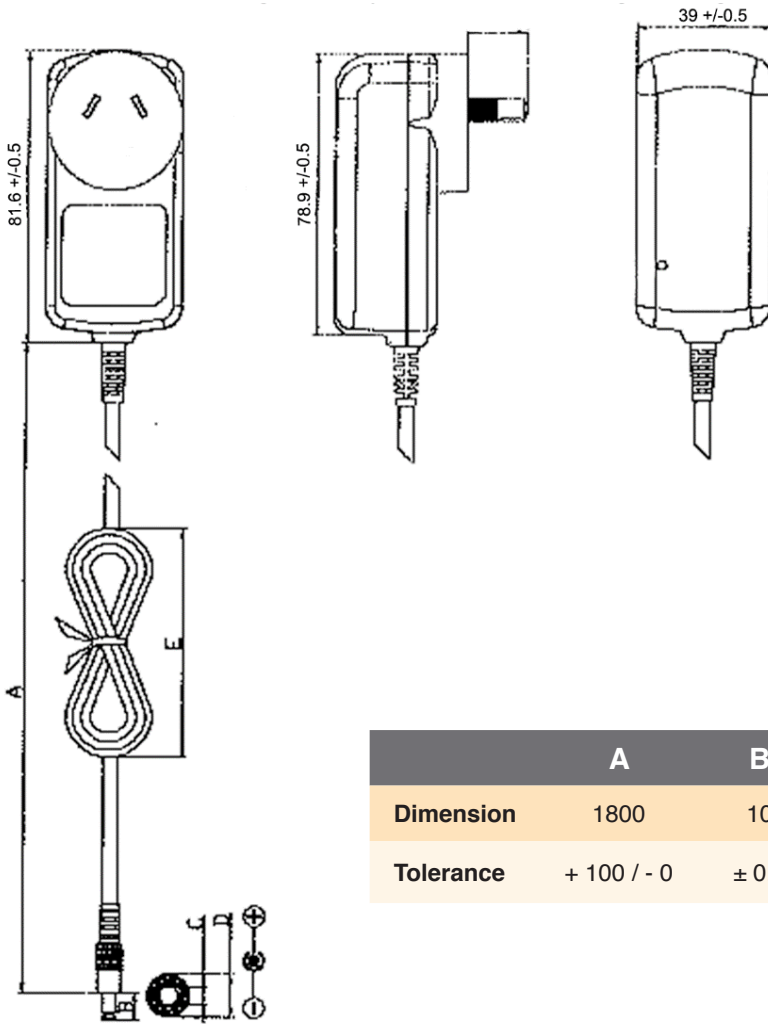


HAZARDOUS SUBSTANCES

All components and materials used shall be in compliance with:

- EU Directive 2002/95/EC "RoHS"
- EU Directive "REACH"
- EU Directive 2005 / 84 / EC "PHTs 16P"
- Germany Doc. ZEK01-08, "PAHs"

OUTLINE DRAWING



	A	B	C	D	E
Dimension	1800	10	1.3	3.5	80
Tolerance	+ 100 / - 0	± 0.6	± 0.1	± 0.1	± 10

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