Laptop Power Adapter



Single Output 120W Data Sheet

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Description

This series is class 1, single-output AC to DC 120W green adapter with C6 inlet type. It can be operated from AC 90V~264V with good efficiency performance for Notebook / AIO / Mini PC / Thin Client /Docking application. It also complies world-wide Safety and EMC regulations.

Features

- * Full AC input voltage design with C6 socket
- * Withstand 300Vac surge voltage for 5 seconds
- * Full Protections: Short-circuit/ Over-voltage/
- Over-current/ Over temperature operating.
- * Energy efficiency level VI compliance * IEC/EN 62368-1 design compliance
- * Up to 5000 meters operating altitude (note #4)
- * High reliability





Electrical Specification

Electrical Specification	
Model Name	PA-1121-26M4
Output	
Rated power	120W
Rated voltage	19.5V
Rated current	6.15A
Ripple & Noise(max.) (note #2)	380mV
Line & load regulation	±5%
Hold-up time(typ.)	5ms
Timing: AC ON delay / rising (max.)	5 sec / 100ms
Input	
Rated voltage range	100~240Vac
Operated voltage range	90~264Vac, 300Vac for 5 sec
Current range (max.)	1.9A/100Vac
Inrush current	No component damaged (<l<sup>2*t).</l<sup>
Frequency range	50-60Hz
Leakage current (max.)	50uA at 240Vac
Average efficiency (typ.)	89%

Over voltage (max.) 140% of rated voltage, latch-off protection Over current (max.) 160% of rated current, latch-off protection Short circuit at O/P No damage, latch-off protection Over temperature No damage, latch-off protection Others MTBF (min.) (note#3) 100K hours @ rated load Environment Temperature (note#5) (operating) 0~35℃ / (storage) -20~85℃ Humidity (operating) 95% RH non-condensing / (storage) 95% RH Altitude (max.) 5000 meters Mechanical Dimension 136(L)*68(W)*25(H) mm Vibration (10°500 Hz, 56 20min./1cycle per axis for all axes (X, Y, Z) Weight (max.) Safety Standard CB/IEC62368-1,TUV62368-1,UL62368-1,EN62368-1,CCC2688-1 CCC GB4943.1,PSE J62368-1,BSMI CNS15598-1,KC62368-1 Withstand voltage Input-Output: 4242VDC / Input-FG: 215VDC Isolation resistance(min.) Input-Output: 30Mohm @ 500VDC,	Protection Function		
Short circuit at O/P Over temperature No damage, latch-off protection Others MTBF (min.) (note#3) 100K hours @ rated load Environment Temperature (note#5) (operating) 0"35"C / (storage) -20"85"C Humidity Altitude (max.) 5000 meters Mechanical Dimension 136(L)*68(W)*25(H) mm Vibration 10"500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z) Weight (max.) 365g Safety Standard CB/IEC62368-1,TUV62368-1,UL62368-1,EN62368-1, CCC GB4943.1,PSE J62368-1,BSMI CNS15598-1,KC62368-1 Withstand voltage Input-Output: 4242VDC / Input-FG: 2150VDC Isolation resistance(min.) Input-Output: 30Mohm @ 500VDC, 25"C, 70%RH EMC ENS5032 (CISPR32) Conducted EMI: class B / Radiated EMI: class B EN61000-3-2 Harmonic distortion: Class D EN61000-4-2 ESD: ±8KV contact discharge / ±15KV contact discharge EN61000-4-3 Radiated RF immunity: 3V/m EN61000-4-6 EN61000-4-8 Magnetic field immunity: 3A/m	Over voltage (max.)	140% of rated voltage, latch-off protection	
Over temperature No damage, latch-off protection Others MTBF (min.) (note#3) 100K hours @ rated load Environment Temperature (note#5) (operating) 0°35°C / (storage) -20°85°C Humidity (operating) 95% RH non-condensing / (storage) 95% RH Altitude (max.) 5000 meters Mechanical Dimension 136(L)*68(W)*25(H) mm Vibration 10°500 Hz, 5G 20min./1cycle per axis for all axes (X, Y, Z) Weight (max.) 365g Safety Standard CB/IEC62368-1,TUV62368-1,UL62368-1,EN62368-1, CCC GB4943.1,PSE J62368-1,EN62368-1, CCC GB4943.1,PSE J62368-1,BSMI CNS15598-1,KC62368-1 Withstand voltage Input-Output: 4242VDC / Input-FG: 2150VDC Isolation resistance(min.) Input-Output: 30Mohm @ 500VDC, 25°C, 70%RH EMC ENS5032 (CISPR32) Conducted EMI: class B / Radiated EMI: class B EN61000-3-2 Harmonic distortion: Class D EN61000-4-2 ESD: ±8KV contact discharge / ±15KV contact discharge EN61000-4-3 Radiated RF immunity: 3V/m EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3J/m	Over current (max.)	160% of rated current, latch-off protection	
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Temperature (note#s) 100K hours @ rated load	Over temperature	No damage, latch-off protection	
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CCC GB4943.1,PSE J62368-1,BSMI CNS15598-1,KC62368-1 Withstand voltage Input-Output: 4242VDC / Input-FG: 2150VDC Isolation resistance(min.) Input-Output: 30Mohm @ 500VDC, 25°C, 70%RH EMC EN55032 (CISPR32) Conducted EMI: class B / Radiated EMI: class B FCC Conducted EMI: class B / Radiated EMI: class B EN61000-3-2 Harmonic distortion: Class D EN61000-4-2 ESD: ±8KV contact discharge / ±15KV contact discharge EN61000-4-3 Radiated RF immunity: 3V/m EN61000-4-4 EFT: ±1KV (AC port) EN61000-4-5 Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	Safety		
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EN61000-3-2 EN61000-4-2 ESD: ±8KV contact discharge / ±15KV contact discharge EN61000-4-3 EN61000-4-4 EFT: ±1KV (AC port) EN61000-4-5 Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	EN55032 (CISPR32)	Conducted EMI: class B / Radiated EMI: class B	
EN61000-4-2 ESD: ±8KV contact discharge / ±15KV contact discharge EN61000-4-3 Radiated RF immunity: 3V/m EN61000-4-4 EFT: ±1KV (AC port) Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	FCC	Conducted EMI: class B / Radiated EMI: class B	
EN61000-4-3 Radiated RF immunity: 3V/m EN61000-4-4 EFT: ±1KV (AC port) EN61000-4-5 Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	EN61000-3-2	Harmonic distortion: Class D	
EN61000-4-4 EFT: ±1KV (AC port) EN61000-4-5 Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	EN61000-4-2	ESD: ±8KV contact discharge / ±15KV contact discharge	
EN61000-4-5 Surge: ±1KV DM / ±2KV CM EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	EN61000-4-3	Radiated RF immunity: 3V/m	
EN61000-4-6 Conducted RF immunity: 3V/m EN61000-4-8 Magnetic field immunity: 3A/m	EN61000-4-4	EFT: ±1KV (AC port)	
EN61000-4-8 Magnetic field immunity: 3A/m	EN61000-4-5	Surge: ±1KV DM / ±2KV CM	
	EN61000-4-6	Conducted RF immunity: 3V/m	
EN61000-4-11 Voltage dip immunity	EN61000-4-8	Magnetic field immunity: 3A/m	
	EN61000-4-11	Voltage dip immunity	

Notes

- #1: All specification defined at 230Vac/50Hz, rated power and 25°C ambient temperature if not mentioned specifically.
- #2: Ripple noise is measured with 0.47uF MLCC & 47uF low ESR capacitor.
- #3: Calculated by Telcordia SR332 at 25 $^{\circ}\text{C}\,$ ambient temperature.
- #4: When operating altitude is higher than 2000m, the environment temperature derating factor is $0.36^{\circ}\text{C}/100\text{m}$.

Mechanical Specification

PA-1121-26M4

