250W ITE Power Supplies
Open Frame Series

Dual Output 12V&54V 250W Maximum PFC Data Sheet

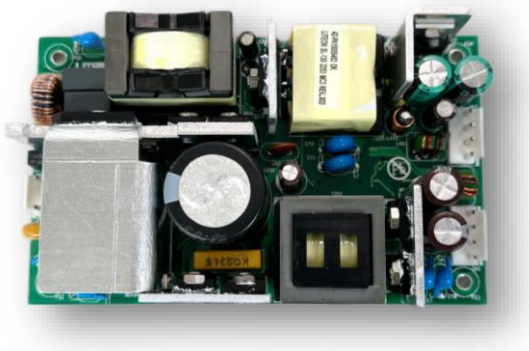
For the latest revision, please visit **power.liteon.com**

Description

This is an AC to DC switching power supply in a package of 3 x 5 inches is a dual outputs 54V & 12V class-I PSU. This PSU capable of delivering 250 watts continuous power with 5CFM forced air cooling at 50℃ operation temperature. It complies with worldwide safety and EMC regulations (refer to details below). This PSU is suitable for information & networking applications.

Features

* Full AC input voltage design.
* Withstand 300Vac surge voltage for 5 seconds
* Full Protections: Short-circuit/ Over-voltage/ Over-current/ Over temperature
* IEC/EN 62368-1 design compliance
* Up to 5000 meters operating altitude (note #4)
* High efficiency and high reliability
* Isolated between +12V & +54V outputs
* Isolated between +54V GND & RETURN



Electrical Specification

Model Name	PA-2251-15	
Output		
Rated power	250W	
Rated voltage	12V	54V
Rated current	5A (max)	3.52A (max)
Ripple & Noise(max.) (note #2)	200mV	500mV
Line & load regulation	±3%	±3%
Hold-up time(typ.)	20ms	20ms
Timing: AC ON delay / rising (max.)	3 sec / 50ms	3 sec / 50ms
Input		
Rated voltage range	100~240Vac	
Operated voltage range (note #5)	85~264Vac, 300Vac for 5 sec	
Current range (max.)	5A/100Vac	
Inrush current (typ.)	100A/230Vac (cold start)	

Frequency range	50-60Hz	
Leakage current (max.)	0.5mA at 240Vac	
Efficiency (typ.)	90%	
Protection Function		
Over voltage (max.)	< 16V, latch-off protection	< 63V, latch-off protection
Over current (max.)	120%~150% of rated current, hiccup mode protection until fault is removed	120%~150% of rated current, hiccup mode protection until fault is removed
Short circuit at O/P	No damage, hiccup mode protection until fault is removed	No damage, hiccup mode protection until fault is removed
Over temperature	No damage, auto recovery until temperature is back to normal	No damage, auto recovery until temperature is back to normal
Others		
MTBF (min.) (note#3)	500K hours @ rated load with forced air cooling	
Environment		
Temperature (note#6)	(operating) -20~50℃ / (storage) -40~85℃	
Humidity	(operating) 10~90% RH non-condensing / (storage) 5~95% RH	
Altitude (max.)	5000 meters	
Mechanical		
Dimension	127mm(L)* 76.2mm(W)*34mm(H)	
Vibration	5~200 Hz, 0.5G 90min./1cycle per axis for all axes (X, Y, Z)	
Weight (typ.)	500g	
Safety		
Standard	IEC/EN 62368-1	
Withstand voltage	Input-Output: 4242VDC / Input-FG: 2150VDC / Output-FG: 700VDC	
Isolation resistance(min.)	Input-Output: 100Mohm @ 500VDC, 25℃, 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 (note #5)	ESD: ±8KV contact discharge / ±15KV contact discharge	
EN61000-4-3	Radiated RF immunity: 10V/m	
EN61000-4-4	EFT: ±2KV (AC port)	
EN61000-4-5	Surge: ±2KV DM / ±4KV CM	
EN61000-4-6	Conducted RF immunity: 3V/m	
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℃ ambient temperature if not mentioned specifically.

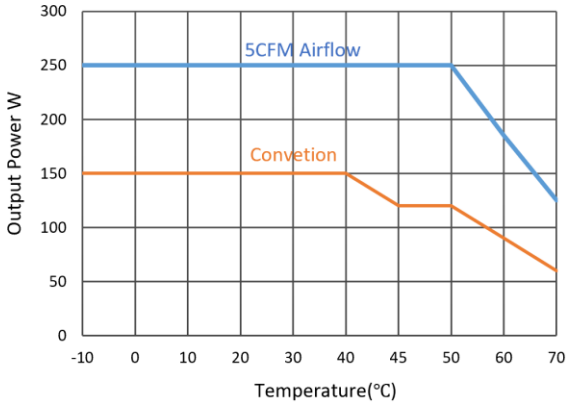
#2: Ripple noise is measured by a 30cm length, twisted wires with 0.1uF MLCC & 47uF low ESR capacitor.

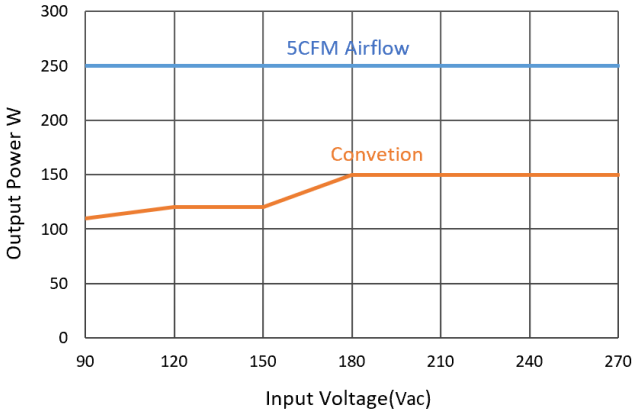
#3: Calculated by Telcordia SR332 at 40℃ ambient temperature.

#4: When operating altitude is higher than 2000m, the environment temperature derating factor is 0.36℃/100m.

#5: ESD was tested with system enclosure.

#6: De-rating curve of AC input voltage and ambient temperature:





Mechanical Specification