

Lab ID#: NZ12002112
Receipt Date: Dec 29, 2022
Test Date: Jan 17, 2023

Report: 23PS2112A
Report Date: Jan 16, 2023

DUT INFORMATION

Brand	NZXT
Manufacturer (OEM)	Channel Well Technology
Series	C Gold
Model Number	PA-2G1BB
Serial Number	5222AN44400001
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	14
Rated Frequency (Hz)	50-60
Rated Power (W)	1200
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (HA13525H12SF-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+-2°C / +- 3.6°F)
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.0 PSU Power Excursion	✓

115V

Average Efficiency	88.929%
Efficiency With 10W (≤500W) or 2% (>500W)	79.097
Average Efficiency 5VSB	78.703%
Standby Power Consumption (W)	0.0448000
Average PF	0.990
Avg Noise Output	35.78 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	Standard+

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	22	22	100	3	0.3
	Watts	120		1200	15	3.6
Total Max. Power (W)		1200				

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	16-20AWG	No
4+4 pin EPS12V (700mm)	1	1	16AWG	No
8 pin EPS12V (700mm)	1	1	16AWG	No
6+2 pin PCIe (650mm+150mm)	2	4	16-18AWG	No
12+4 pin PCIe (640mm) (600W)	1	1	16-24AWG	No
SATA (500mm+150mm)	2	4	18AWG	No
SATA (500mm+150mm+150mm+150mm)	1	4	18AWG	No
4-pin Molex (500mm+150mm+150mm+150mm)	1	4	18AWG	No
AC Power Cord (1410mm) - C13 coupler	1	1	14AWG	-

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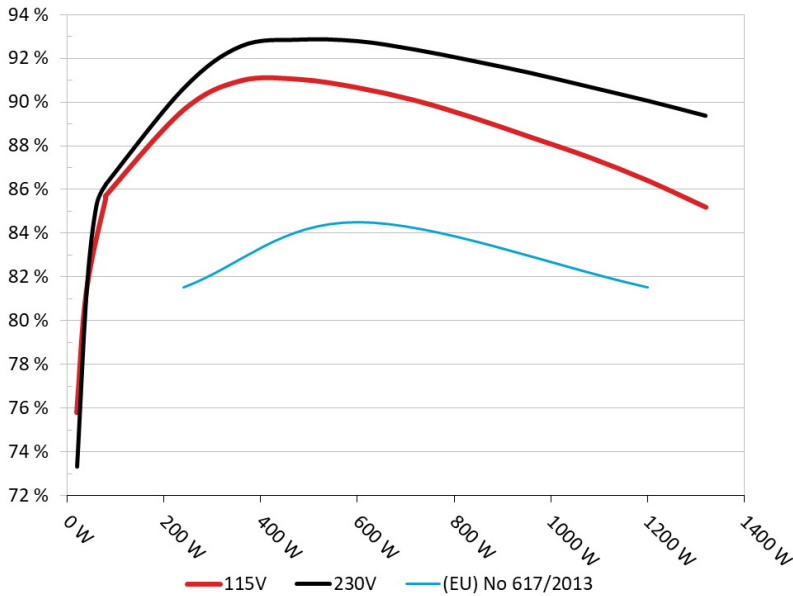
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: NZXT C1200 Gold

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



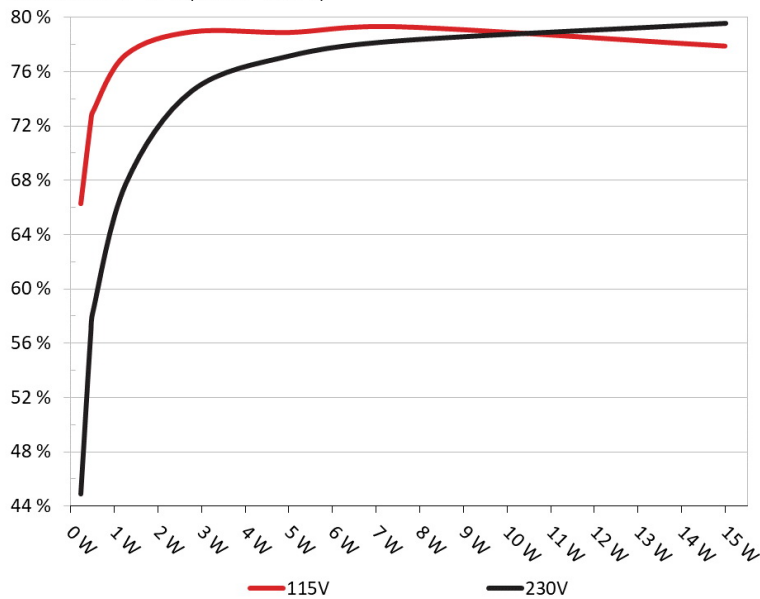
INFO

The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY

5VSB Efficiency: NZXT C1200 Gold

Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	66.25%	0.034
	5.04V	0.343W		115.16V
2	0.09A	0.454W	72.289%	0.062
	5.039V	0.628W		115.16V
3	0.55A	2.769W	78.931%	0.273
	5.032V	3.508W		115.16V
4	1A	5.027W	78.885%	0.379
	5.026V	6.372W		115.16V
5	1.5A	7.531W	79.305%	0.436
	5.019V	9.496W		115.16V
6	3A	14.992W	77.878%	0.511
	4.997V	19.25W		115.15V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	44.884%	0.015
	5.043V	0.506W		230.39V
2	0.09A	0.454W	56.724%	0.024
	5.041V	0.801W		230.38V
3	0.55A	2.769W	74.551%	0.106
	5.034V	3.715W		230.39V
4	1A	5.029W	77.144%	0.174
	5.027V	6.517W		230.39V
5	1.5A	7.532W	78.249%	0.235
	5.02V	9.626W		230.39V
6	3A	14.998W	79.529%	0.343
	4.999V	18.859W		230.39V

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115V

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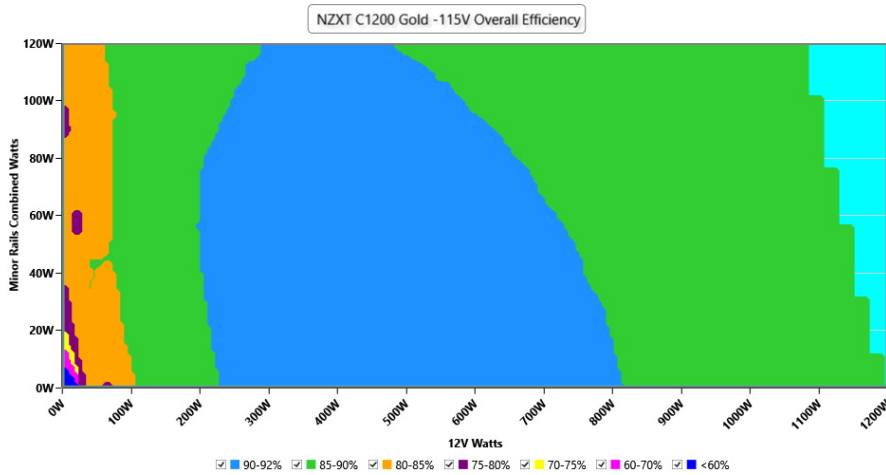
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EFFICIENCY GRAPH 115V

INFO

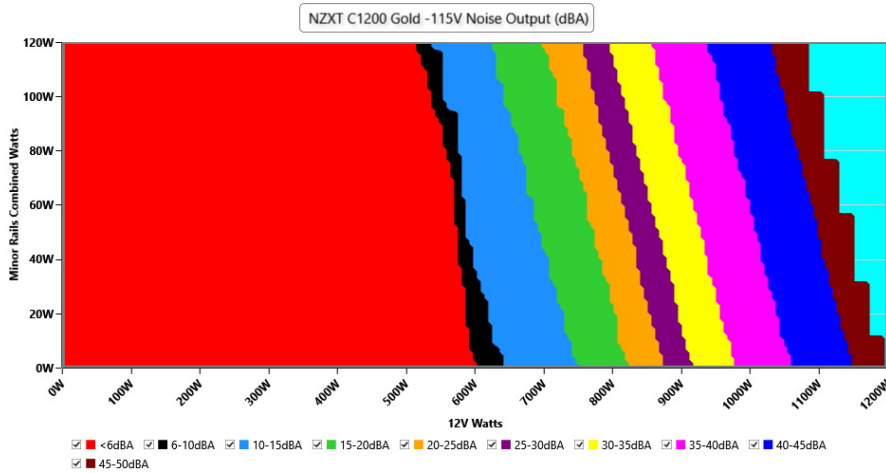
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



NOISE GRAPH 115V

INFO

The PSU's noise in its entire operational range and under 30-32 °C (+2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails



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VAMPIRE POWER -115V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.12 V	115.09 V	113.85 V	115.13 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.96 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.15 %	2.00 %	PASS
Real Power:	0.045 W	0.043 W	N/A	0.047 W	N/A	N/A
Apparent Power:	10.007 W	10.001 W	N/A	10.016 W	N/A	N/A
Power Factor:	0.005	N/A	N/A	N/A	N/A	N/A

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 115V

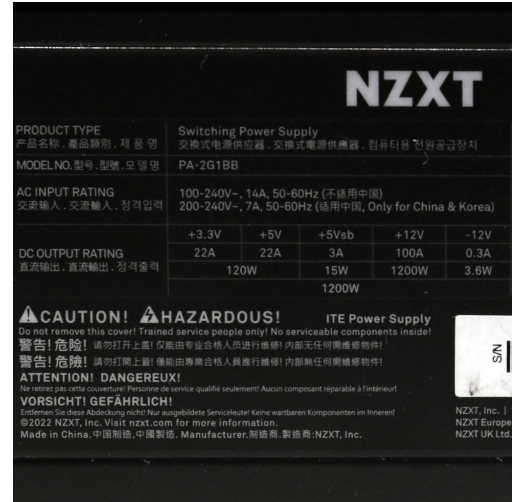
Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	8.100A	1.991A	2.008A	0.998A	119.98	86.214%	0	<6.0	44.53°C	0.985
	12.144V	5.023V	3.286V	5.011V	139.165				40.07°C	115.09V
20%	17.216A	2.988A	3.013A	1.199A	239.932	90.126%	0	<6.0	45.77°C	0.992
	12.142V	5.02V	3.286V	5.007V	266.213				40.94°C	115.06V
50%	45.397A	4.989A	5.025A	1.803A	599.308	91.168%	421	<6.0	42.3°C	0.991
	12.089V	5.011V	3.284V	4.992V	657.366				48.26°C	114.97V
100%	92.273A	9.012A	9.058A	3.024A	1199.516	86.908%	2152	50.2	45.08°C	0.996
	12.028V	4.993V	3.278V	4.961V	1380.224				55.13°C	114.79V

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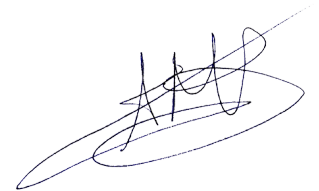


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

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