

Anex

NZXT C1200 Gold

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
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				

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	25.7
AC Loss to PWR_OK Hold Up Time (ms)	23.1
PWR_OK Inactive to DC Loss Delay (ms)	2.6

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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	-

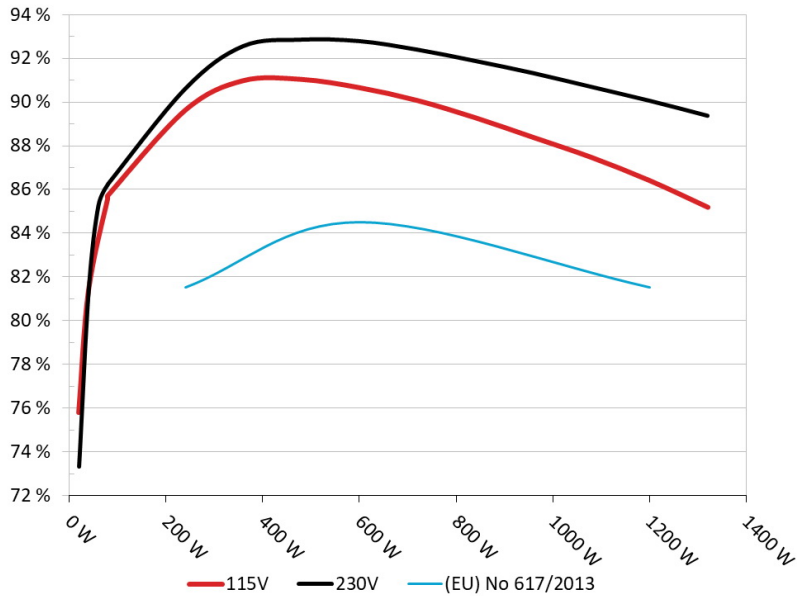
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: NZXT C1200 Gold

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



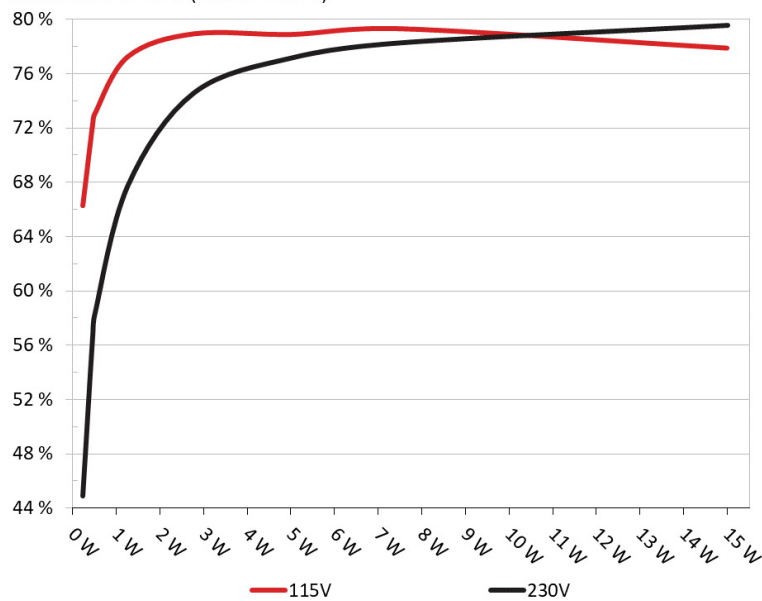
INFO

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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Anex

NZXT C1200 Gold

115V

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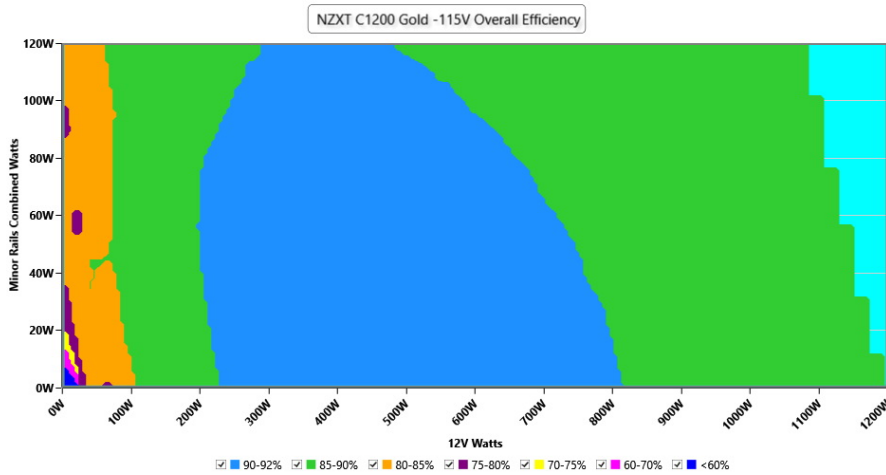
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EFFICIENCY GRAPH 115V

INFO

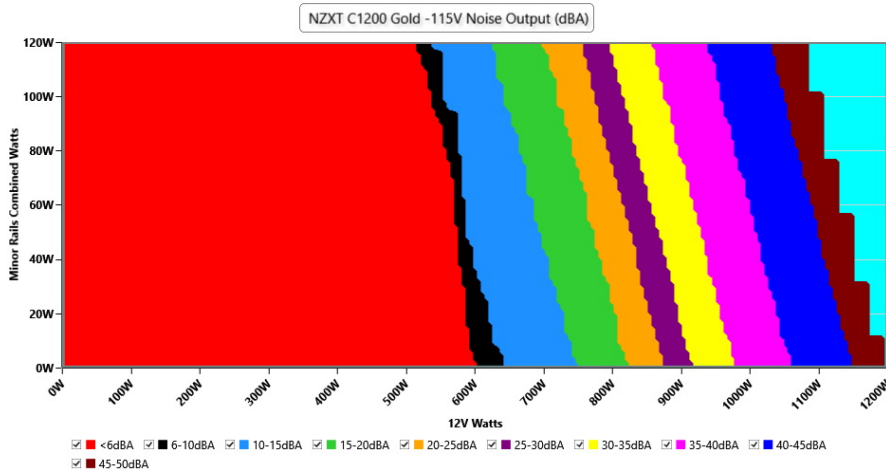
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



NOISE GRAPH 115V

INFO

The PSU's noise in its entire operational range and under 30-32 °C 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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10-110% LOAD TESTS 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
30%	26.664A	3.489A	3.516A	1.4A	359.149	91.481%	0	<6.0	46.34°C	0.986
	12.118V	5.017V	3.285V	5.002V	392.592				41.18°C	115.03V
40%	36.213A	3.989A	4.019A	1.601A	479.53	91.545%	404	<6.0	41.94°C	0.988
	12.104V	5.014V	3.284V	4.996V	523.825				47.45°C	115V
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
60%	54.670A	5.99A	6.031A	2A	719.821	90.577%	646	14.7	42.91°C	0.992
	12.073V	5.009V	3.283V	4.988V	794.705				49.26°C	114.93V
70%	63.896A	6.993A	7.038A	2.208A	839.593	89.785%	984	28.5	43.31°C	0.994
	12.058V	5.006V	3.282V	4.983V	935.113				50.32°C	114.91V
80%	73.219A	7.999A	8.044A	2.31A	959.619	88.881%	1324	38.1	43.86°C	0.994
	12.043V	5.002V	3.281V	4.979V	1079.659				51.91°C	114.87V
90%	82.853A	8.503A	8.535A	2.413A	1079.432	87.969%	1808	46.3	44.23°C	0.995
	12.033V	4.998V	3.28V	4.974V	1227.062				53.24°C	114.83V
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
110%	101.641A	10.023A	10.162A	3.027A	1320.135	85.682%	2153	50.2	46.53°C	0.996
	12.021V	4.988V	3.276V	4.957V	1540.741				57.43°C	114.75V
CL1	0.115A	14.372A	14.532A	0A	121.286	81.4%	866	24.6	40.24°C	0.985
	12.160V	5.024V	3.282V	5.038V	148.998				45.65°C	115.11V
CL2	0.115A	21.842A	0A	0A	111.384	80.309%	868	24.7	41.63°C	0.985
	12.166V	5.036V	3.28V	5.065V	138.695				49°C	115.11V
CL3	0.120A	0A	22.071A	0A	74.039	76.954%	1099	31.8	42.84°C	0.98
	12.096V	5.021V	3.289V	5.013V	96.214				52.03°C	115.12V
CL4	99.795A	0A	0A	0A	1200.284	87.066%	2151	50.2	45.24°C	0.996
	12.027V	5.003V	3.285V	5.011V	1378.608				56.16°C	114.8V

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20-80W LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.228A	0.496A	0.5A	0.198A	19.99	76.274%	0	<6.0	39.65°C	0.864
	12.093V	5.044V	3.296V	5.043V	26.212				36.54°C	115.12V
40W	2.702A	0.695A	0.701A	0.298A	39.989	81.838%	0	<6.0	40.38°C	0.947
	12.096V	5.039V	3.294V	5.037V	48.867				37.1°C	115.11V
60W	4.180A	0.895A	0.903A	0.398A	59.987	86.097%	0	<6.0	41.75°C	0.967
	12.088V	5.027V	3.288V	5.024V	69.676				37.99°C	115.11V
80W	5.652A	1.094A	1.104A	0.498A	79.931	85.988%	0	<6.0	43.01°C	0.981
	12.086V	5.025V	3.287V	5.02V	92.953				39.05°C	115.1V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	5.26mV	4.35mV	5.32mV	4.54mV	Pass
20% Load	6.23mV	5.27mV	5.73mV	4.54mV	Pass
30% Load	10.92mV	4.91mV	6.04mV	4.84mV	Pass
40% Load	8.43mV	5.62mV	7.88mV	5.20mV	Pass
50% Load	8.94mV	5.57mV	7.27mV	4.94mV	Pass
60% Load	9.60mV	13.65mV	19.50mV	13.46mV	Pass
70% Load	9.91mV	7.98mV	14.64mV	6.93mV	Pass
80% Load	10.83mV	6.65mV	11.62mV	5.30mV	Pass
90% Load	11.49mV	7.26mV	11.41mV	5.45mV	Pass
100% Load	17.81mV	8.44mV	13.83mV	6.62mV	Pass
110% Load	18.62mV	8.90mV	14.41mV	6.95mV	Pass
Crossload1	7.12mV	6.19mV	10.65mV	5.22mV	Pass
Crossload2	10.06mV	6.85mV	5.32mV	4.43mV	Pass
Crossload3	53.68mV	6.39mV	16.07mV	6.07mV	Pass
Crossload4	16.07mV	7.12mV	10.08mV	5.71mV	Pass

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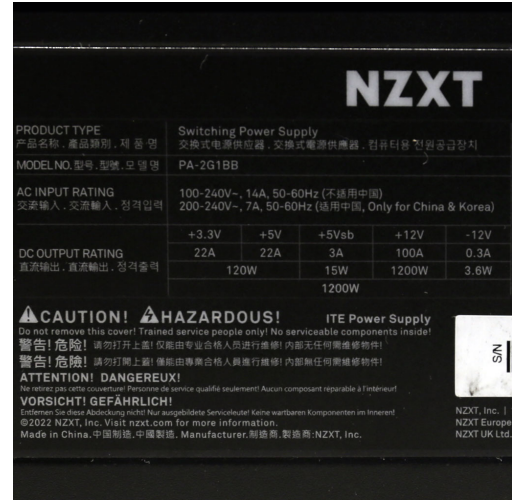
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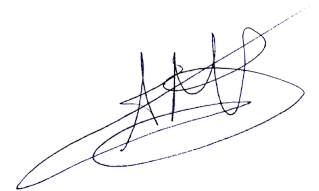


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

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