

Anex

Deepcool PN750D

Lab ID#: DC75002338
Receipt Date: Jan 11, 2024
Test Date: Jan 26, 2024

Report: 24PS2338A
Report Date: Jan 30, 2024

DUT INFORMATION	
Brand	Deepcool
Manufacturer (OEM)	CWT
Series	PN-D
Model Number	PN750D-FC
Serial Number	
DUT Notes	CWT GPW platform

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	50-60
Rated Power (W)	750
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (DF1202512SEHN)
Semi-Passive Operation	X
Cable Design	Fixed cables

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 v3.1 PSU Power Excursion	✓

115V

Average Efficiency	88.569%
Efficiency With 10W (≤500W) or 2% (>500W)	64.403
Average Efficiency 5VSB	77.115%
Standby Power Consumption (W)	0.0408000
Average PF	0.978
Avg Noise Output	36.82 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	Standard+

230V

Average Efficiency	90.713%
Average Efficiency 5VSB	77.068%
Standby Power Consumption (W)	0.1126000
Average PF	0.931
Avg Noise Output	36.20 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	Standard+

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62.5	3	0.3
	Watts	110		750	15	3.6
Total Max. Power (W)		750				

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

Hold-Up Time (ms)	16.9
AC Loss to PWR_OK Hold Up Time (ms)	15.8
PWR_OK Inactive to DC Loss Delay (ms)	1.1

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CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (540mm)	1	1	18-20AWG	No
4+4 pin EPS12V (720mm)	2	2	18AWG	No
6+2 pin PCIe (580mm)	2	2	18AWG	No
12+4 pin PCIe (610mm) (450W)	1	1	16-24AWG	No
SATA (450mm+120mm+120mm+120mm) / 4-pin Molex (+120mm)	2	8 / 2	18AWG	No

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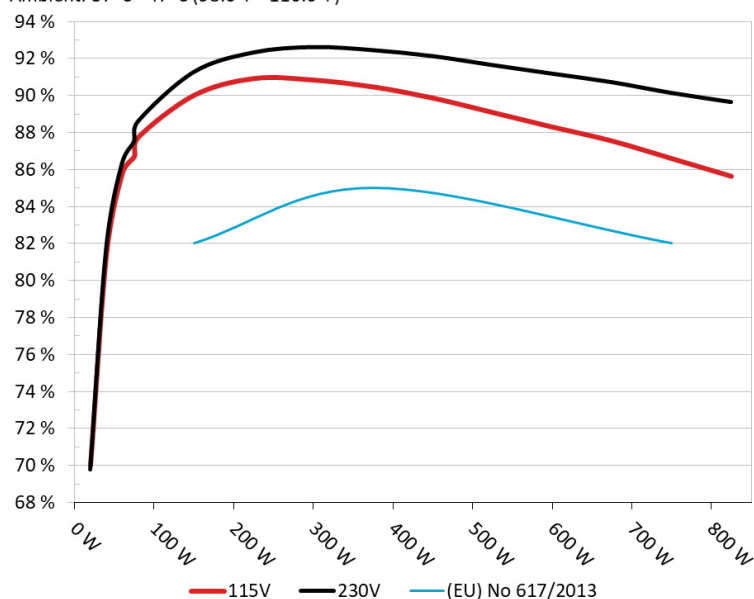
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PAGE 3/16

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Deepcool PN750D

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



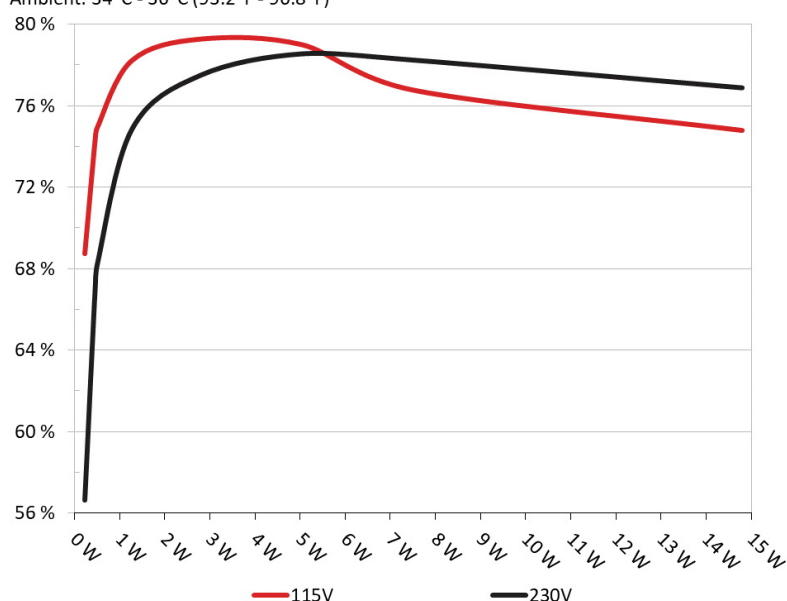
INFO

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: Deepcool PN750D

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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Deepcool PN750D

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.23W	68.459%	0.032
	5.104V	0.336W		114.89V
2	0.09A	0.459W	74.071%	0.058
	5.101V	0.62W		114.89V
3	0.55A	2.79W	78.993%	0.262
	5.074V	3.532W		114.87V
4	1A	5.046W	78.718%	0.363
	5.047V	6.41W		114.87V
5	1.5A	7.526W	76.48%	0.413
	5.018V	9.841W		114.87V
6	3A	14.8W	74.509%	0.477
	4.934V	19.863W		114.87V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.23W	56.356%	0.012
	5.104V	0.409W		229.95V
2	0.09A	0.459W	66.754%	0.019
	5.101V	0.688W		229.95V
3	0.55A	2.791W	77.207%	0.098
	5.075V	3.616W		229.95V
4	1A	5.05W	78.265%	0.164
	5.05V	6.452W		229.95V
5	1.5A	7.534W	77.952%	0.21
	5.022V	9.665W		229.95V
6	3A	14.799W	76.594%	0.321
	4.933V	19.321W		229.95V

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PAGE 5/16

Anex

Deepcool PN750D

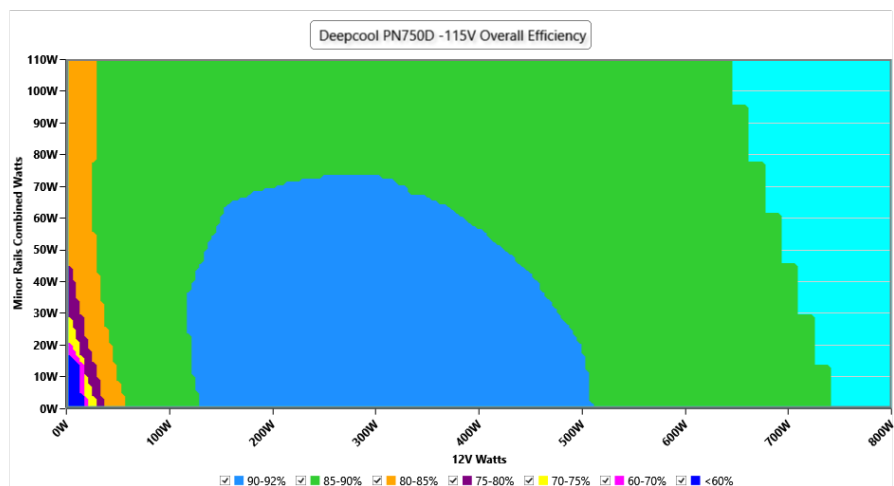
115V

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PAGE 6/16

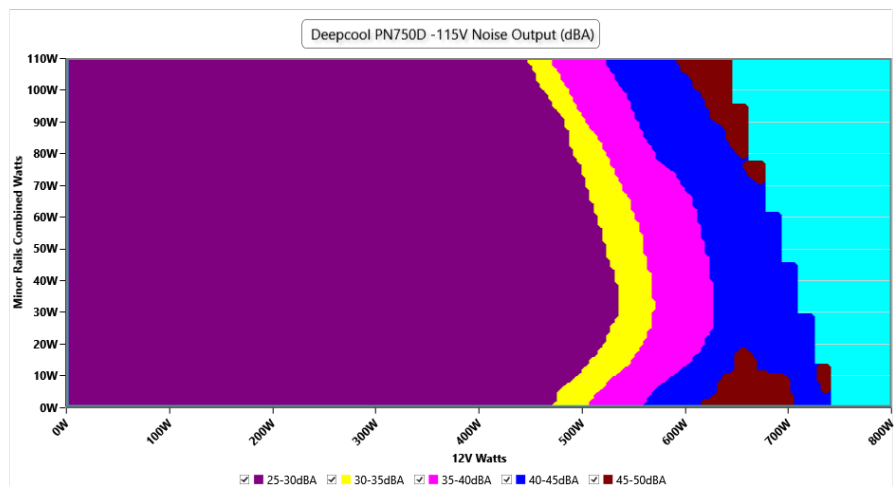
EFFICIENCY GRAPH 115V



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:	114.88 V	114.83 V	113.85 V	114.92 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.98 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.417	1.416	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.14 %	0.11 %	N/A	0.20 %	2.00 %	PASS
Real Power:	0.041 W	-0.002 W	N/A	0.070 W	N/A	N/A
Apparent Power:	11.180 W	11.151 W	N/A	11.216 W	N/A	N/A
Power Factor:	0.004	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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PAGE 8/16

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%	4.436A	1.975A	1.965A	0.991A	74.998	86.726%	1090	26.5	40.04°C	0.949
	12.038V	5.064V	3.358V	5.045V	86.477				44.06°C	114.85V
20%	9.893A	2.963A	2.95A	1.194A	149.926	90.036%	1093	26.5	40.91°C	0.971
	12.031V	5.062V	3.355V	5.025V	166.519				45.22°C	114.82V
30%	15.707A	3.459A	3.445A	1.399A	224.925	90.945%	1097	26.6	41.07°C	0.978
	12.025V	5.06V	3.353V	5.005V	247.317				45.87°C	114.79V
40%	21.534A	3.954A	3.939A	1.605A	300.011	90.864%	1099	26.7	41.7°C	0.979
	12.019V	5.059V	3.351V	4.984V	330.174				46.79°C	114.78V
50%	26.965A	4.944A	4.927A	1.814A	374.41	90.496%	1102	26.7	42.25°C	0.982
	12.012V	5.057V	3.349V	4.962V	413.73				47.73°C	114.74V
60%	32.446A	5.934A	5.915A	2A	449.214	89.895%	1406	33.7	42.84°C	0.982
	12.005V	5.056V	3.348V	4.941V	499.708				48.88°C	114.72V
70%	37.934A	6.926A	6.906A	2.237A	524.26	89.115%	1930	43.0	43.4°C	0.983
	11.998V	5.054V	3.345V	4.918V	588.293				50.49°C	114.69V
80%	43.494A	7.921A	7.898A	2.347A	599.463	88.324%	2253	46.2	43.72°C	0.984
	11.991V	5.051V	3.342V	4.9V	678.71				51.82°C	114.66V
90%	49.394A	8.416A	8.381A	2.457A	674.487	87.57%	2254	46.2	44.37°C	0.985
	11.985V	5.05V	3.341V	4.883V	770.231				53.44°C	114.63V
100%	55.101A	8.913A	8.894A	3.104A	749.71	86.616%	2254	46.2	45.85°C	0.987
	11.978V	5.049V	3.339V	4.833V	865.559				55.91°C	114.6V
110%	60.682A	9.907A	9.979A	3.112A	824.728	85.655%	2255	46.3	46.67°C	0.988
	11.971V	5.047V	3.337V	4.82V	962.841				57.63°C	114.57V
CL1	0.115A	13.094A	13.033A	0A	111.29	83.584%	1115	26.7	40.95°C	0.967
	12.028V	5.055V	3.353V	5.078V	133.148				46.45°C	114.84V
CL2	0.115A	19.78A	0.001A	0.001A	101.389	82.23%	1117	26.8	40.03°C	0.964
	12.033V	5.055V	3.365V	5.086V	123.298				47.05°C	114.84V
CL3	0.117A	0A	19.693A	0.001A	67.406	76.809%	1101	26.7	41.17°C	0.951
	12.032V	5.076V	3.351V	5.084V	87.758				50.27°C	114.85V
CL4	62.534A	0A	0A	0A	749.522	87.702%	2259	46.3	45.96°C	0.987
	11.986V	5.066V	3.35V	5.017V	854.634				56.89°C	114.61V

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Anex

Deepcool PN750D

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	1.234A	0.494A	0.491A	0.196A	19.994	70.035%	1076	26.0	36.7°C	0.831
	12.033V	5.063V	3.358V	5.094V	28.548				39.76°C	114.86V
40W	2.716A	0.691A	0.688A	0.295A	39.994	81.448%	1081	26.1	37.26°C	0.912
	12.032V	5.065V	3.359V	5.086V	49.103				40.56°C	114.86V
60W	4.196A	0.888A	0.884A	0.394A	59.994	85.833%	1083	26.1	38.16°C	0.942
	12.040V	5.064V	3.358V	5.078V	69.896				41.94°C	114.85V
80W	5.674A	1.086A	1.081A	0.493A	79.934	87.766%	1086	26.2	39.48°C	0.952
	12.038V	5.065V	3.358V	5.071V	91.076				43.45°C	114.84V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.72mV	13.03mV	16.91mV	8.31mV	Pass
20% Load	26.04mV	14.17mV	17.63mV	11.51mV	Pass
30% Load	27.74mV	14.94mV	19.70mV	13.94mV	Pass
40% Load	30.42mV	16.79mV	25.13mV	15.12mV	Pass
50% Load	30.88mV	18.86mV	24.46mV	17.08mV	Pass
60% Load	31.40mV	27.97mV	25.39mV	24.93mV	Pass
70% Load	31.91mV	28.59mV	26.22mV	26.69mV	Pass
80% Load	33.67mV	29.16mV	28.70mV	24.62mV	Pass
90% Load	35.47mV	24.73mV	28.86mV	22.14mV	Pass
100% Load	47.24mV	29.92mV	32.85mV	26.91mV	Pass
110% Load	51.81mV	33.30mV	34.22mV	27.47mV	Pass
Crossload1	53.14mV	30.19mV	30.73mV	14.96mV	Pass
Crossload2	36.96mV	38.84mV	24.46mV	16.72mV	Pass
Crossload3	39.44mV	20.50mV	35.27mV	16.78mV	Pass
Crossload4	42.07mV	32.33mV	26.42mV	19.29mV	Pass

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PAGE 10/16

Anex

Deepcool PN750D

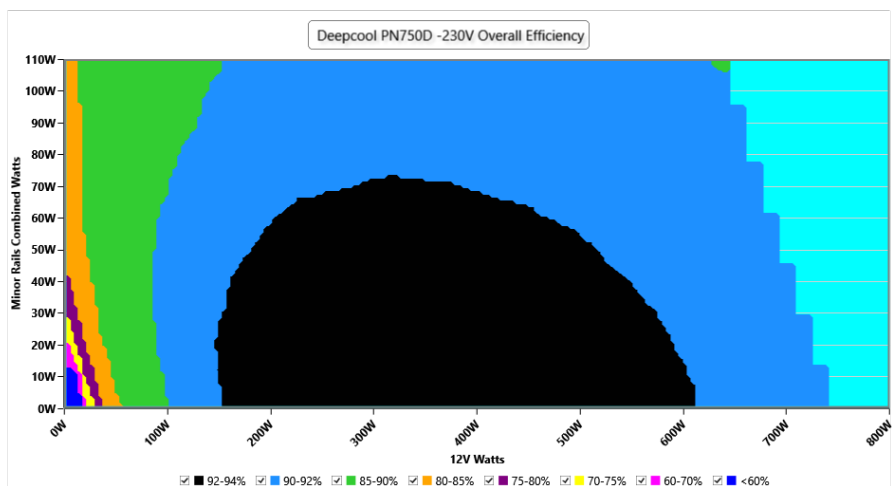
230V

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PAGE 11/16

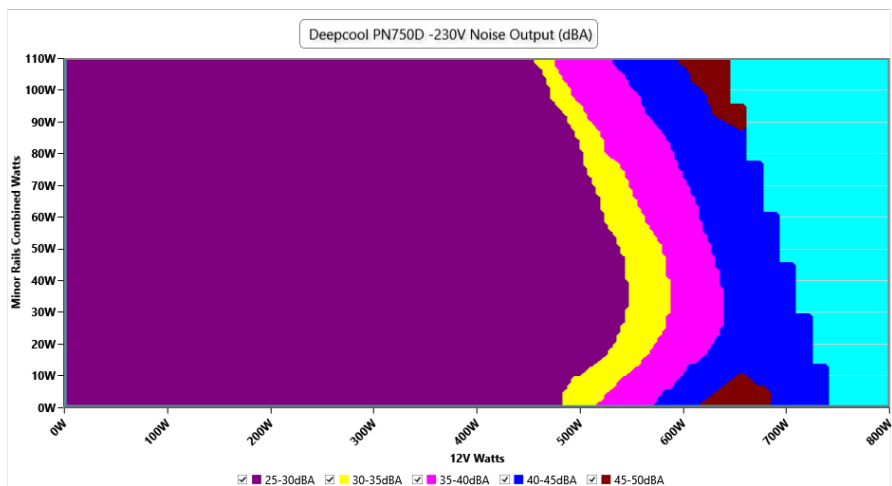
EFFICIENCY GRAPH 230V



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 230V



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 -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.97 V	229.90 V	227.70 V	230.01 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.416	1.416	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.17 %	0.15 %	N/A	0.20 %	2.00 %	PASS
Real Power:	0.113 W	0.062 W	N/A	0.166 W	N/A	N/A
Apparent Power:	38.318 W	38.278 W	N/A	38.361 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

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PAGE 13/16

10-110% LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	4.436A	1.975A	1.965A	0.991A	75.002	87.519%	1091	26.5	40.22°C	0.785
	12.038V	5.064V	3.358V	5.044V	85.697				44.47°C	229.94V
20%	9.894A	2.964A	2.951A	1.194A	149.937	91.27%	1092	26.5	40.82°C	0.891
	12.031V	5.061V	3.355V	5.024V	164.278				45.32°C	229.92V
30%	15.709A	3.459A	3.445A	1.399A	224.939	92.328%	1097	26.6	41.34°C	0.925
	12.024V	5.059V	3.353V	5.003V	243.626				46.38°C	229.91V
40%	21.536A	3.955A	3.939A	1.606A	300.028	92.619%	1098	26.6	41.6°C	0.94
	12.018V	5.058V	3.351V	4.982V	323.935				47.14°C	229.9V
50%	26.970A	4.946A	4.928A	1.814A	374.452	92.453%	1102	26.7	42.26°C	0.949
	12.011V	5.056V	3.349V	4.961V	405.017				48.27°C	229.89V
60%	32.451A	5.935A	5.915A	2A	449.254	92.133%	1378	33.0	42.79°C	0.956
	12.004V	5.056V	3.348V	4.939V	487.619				49.33°C	229.88V
70%	37.941A	6.928A	6.907A	2.238A	524.304	91.652%	1871	42.5	43.29°C	0.96
	11.997V	5.053V	3.345V	4.916V	572.056				50.36°C	229.87V
80%	43.498A	7.922A	7.898A	2.348A	599.485	91.185%	2252	46.2	43.8°C	0.964
	11.991V	5.051V	3.342V	4.899V	657.444				51.9°C	229.85V
90%	49.398A	8.418A	8.382A	2.458A	674.51	90.725%	2255	46.3	44.6°C	0.966
	11.984V	5.049V	3.34V	4.882V	743.465				53.69°C	229.84V
100%	55.105A	8.914A	8.895A	3.104A	749.732	90.142%	2254	46.2	45.13°C	0.968
	11.977V	5.048V	3.339V	4.833V	831.729				55.21°C	229.83V
110%	60.681A	9.911A	9.982A	3.111A	824.686	89.65%	2257	46.3	46.77°C	0.97
	11.970V	5.045V	3.336V	4.823V	919.899				57.71°C	229.81V
CL1	0.115A	13.096A	13.034A	0A	111.287	84.72%	1116	26.7	41.64°C	0.862
	12.028V	5.055V	3.352V	5.078V	131.359				47.17°C	229.94V
CL2	0.115A	19.781A	0.001A	0.001A	101.384	83.035%	1116	26.7	40.35°C	0.851
	12.033V	5.055V	3.365V	5.086V	122.098				47.45°C	229.94V
CL3	0.117A	0A	19.694A	0.001A	67.404	77.471%	1098	26.6	40.28°C	0.786
	12.032V	5.076V	3.351V	5.084V	87.004				49.37°C	229.94V
CL4	62.538A	0A	0A	0A	749.517	91.229%	2263	46.4	45.26°C	0.969
	11.985V	5.063V	3.348V	5.017V	821.587				56.17°C	229.82V

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PAGE 14/16

Anex

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20-80W LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.234A	0.494A	0.491A	0.196A	19.997	69.792%	1074	26.0	36.57°C	0.479
	12.033V	5.062V	3.358V	5.093V	28.651				39.68°C	229.95V
40W	2.716A	0.691A	0.688A	0.295A	39.997	81.73%	1080	26.1	37.51°C	0.638
	12.031V	5.064V	3.359V	5.085V	48.937				40.82°C	229.94V
60W	4.196A	0.889A	0.884A	0.394A	59.997	86.355%	1084	26.1	38.36°C	0.738
	12.040V	5.064V	3.358V	5.078V	69.478				41.85°C	229.94V
80W	5.674A	1.086A	1.081A	0.493A	79.941	88.603%	1087	26.2	39.12°C	0.796
	12.038V	5.065V	3.358V	5.07V	90.227				42.98°C	229.94V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.73mV	11.75mV	16.08mV	8.57mV	Pass
20% Load	24.66mV	13.19mV	18.00mV	11.10mV	Pass
30% Load	26.04mV	14.73mV	20.01mV	14.25mV	Pass
40% Load	27.63mV	16.43mV	24.30mV	14.50mV	Pass
50% Load	30.16mV	18.19mV	22.80mV	16.52mV	Pass
60% Load	31.35mV	27.72mV	24.62mV	25.65mV	Pass
70% Load	32.63mV	28.49mV	25.86mV	26.22mV	Pass
80% Load	32.89mV	28.85mV	27.41mV	25.39mV	Pass
90% Load	34.90mV	24.42mV	28.85mV	24.77mV	Pass
100% Load	48.70mV	34.16mV	33.98mV	30.54mV	Pass
110% Load	53.52mV	36.67mV	35.24mV	34.30mV	Pass
Crossload1	51.97mV	29.09mV	30.70mV	14.56mV	Pass
Crossload2	35.63mV	38.18mV	24.10mV	16.72mV	Pass
Crossload3	38.36mV	20.45mV	33.87mV	16.62mV	Pass
Crossload4	40.63mV	22.32mV	26.40mV	15.18mV	Pass

All data and graphs included in this test report can be used by any individual on the following conditions:

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PAGE 15/16

Anex

Deepcool PN750D



Top side

PN750D

DEEPCOOL

80 PLUS GOLD

Switching Power Supply 开关电源供应器

Model No. 型号	PN750D-FC				
AC Input 交流输入	100-240Vac 10-5A 50-60Hz				
DC Output 直流输出	+3.3V	+5V	+12V	-12V	+5VSB
Max Output Current 最大输出电流	20A	20A	62.5A	0.3A	3A
Max Combined Wattage 最大组合功率	110W		750W	3.6W	15W
Total Output 总功率	750W				

⚡

⚠

CAUTION:

Hazardous voltage inside!

DO NOT open this power supply unit!

To be serviced by trained personnel only.

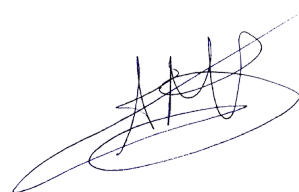
No user serviceable components inside.

内有高压, 请勿开启

Cet appareil n'est pas conçu pour être utilisable par l'utilisateur et contient une haute tension à l'intérieur qui peut être dangereux lorsqu'il est ouvert. En cas de dysfonctionnement, veuillez en informer votre revendeur ou distributeur local pour le service.

Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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PAGE 16/16