

Lab ID#: BQ19700025
Receipt Date: Apr 19, 2019
Test Date: Apr 25, 2019

Report: 20PS680A
Report Date: Apr 30, 2019

DUT INFORMATION	
Brand	Be quiet!
Manufacturer (OEM)	FSP
Series	Pure Power 10
Model Number	L10-CM-700
Serial Number	275S8251000034
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	50-60
Rated Power (W)	700
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (BQ QF1-12025-HS)
Semi-Passive Operation	X
Cable Design	Fixed cables

POWER SPECIFICATIONS							
Rail		3.3V	5V	12V1	12V2	5VSB	-12V
Max. Power	Amps	25	20	36	30	3	0.3
	Watts	150		56		15	3.6
Total Max. Power (W)		700					

CABLES AND CONNECTORS				
Captive Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (580mm)	1	1	18-24AWG	No
4+4 pin EPS12V (640mm)	1	1	18AWG	No
6+2 pin PCIe (530mm+150mm)	2	4	18AWG	No
SATA (510mm+150mm+150mm)	1	3	18AWG	No
SATA (510mm+150mm) / 4-pin Molex (+150mm) / FDD (+150mm)	1	2 / 1 / 1	18-24AWG	No
SATA (520mm) / 4-pin Molex (+150mm+150mm)	1	1 / 2	18AWG	No
AC Power Cord (1370mm) - C13 coupler	1	1	18AWG	-

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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	✓

115V

Average Efficiency	87.694%
Efficiency With 10W (≤500W) or 2% (>500W)	59.221
Average Efficiency 5VSB	78.540%
Standby Power Consumption (W)	0.1260780
Average PF	0.989
Avg Noise Output	20.82 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A

230V

Average Efficiency	89.059%
Average Efficiency 5VSB	77.794%
Standby Power Consumption (W)	0.2031410
Average PF	0.974
Avg Noise Output	19.73 dB(A)
Efficiency Rating (ETA)	SILVER
Noise Rating (LAMBDA)	A+

TEST EQUIPMENT

Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Chroma 61604, Keysight AC6804B	
Power Analyzers	N4L PPA1530 x2, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

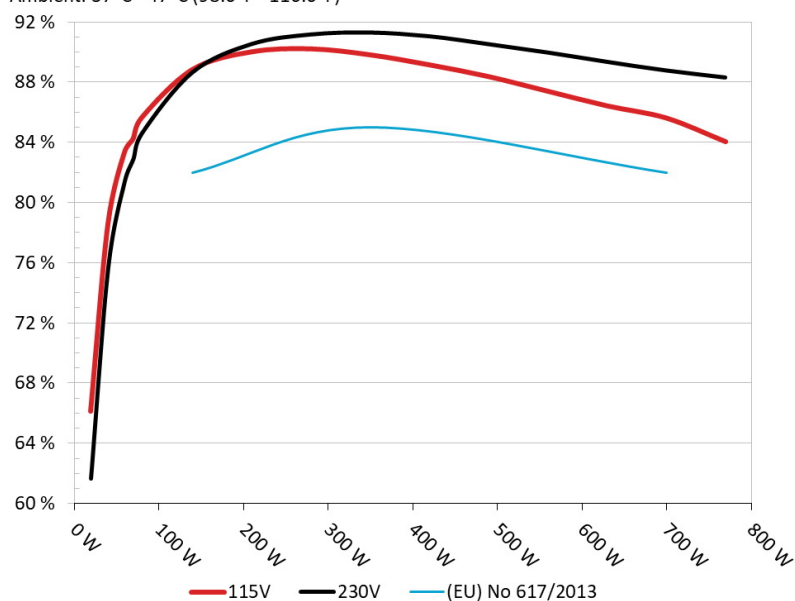
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: be quiet! L10-CM-700

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



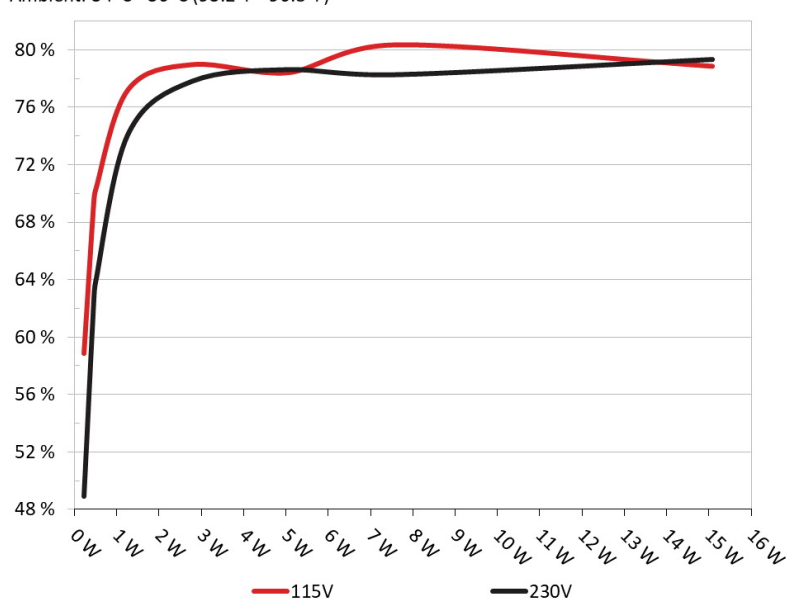
INFO

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: be quiet! L10-CM-700

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	0.229	58.869%	0.075
	5.087V	0.389		115.11V
2	0.090A	0.458	69.289%	0.121
	5.086V	0.661		115.11V
3	0.550A	2.792	78.959%	0.328
	5.075V	3.536		115.11V
4	1.000A	5.067	78.400%	0.380
	5.066V	6.463		115.11V
5	1.500A	7.585	80.333%	0.406
	5.056V	9.442		115.11V
6	3.000A	15.075	78.844%	0.451
	5.025V	19.120		115.11V

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

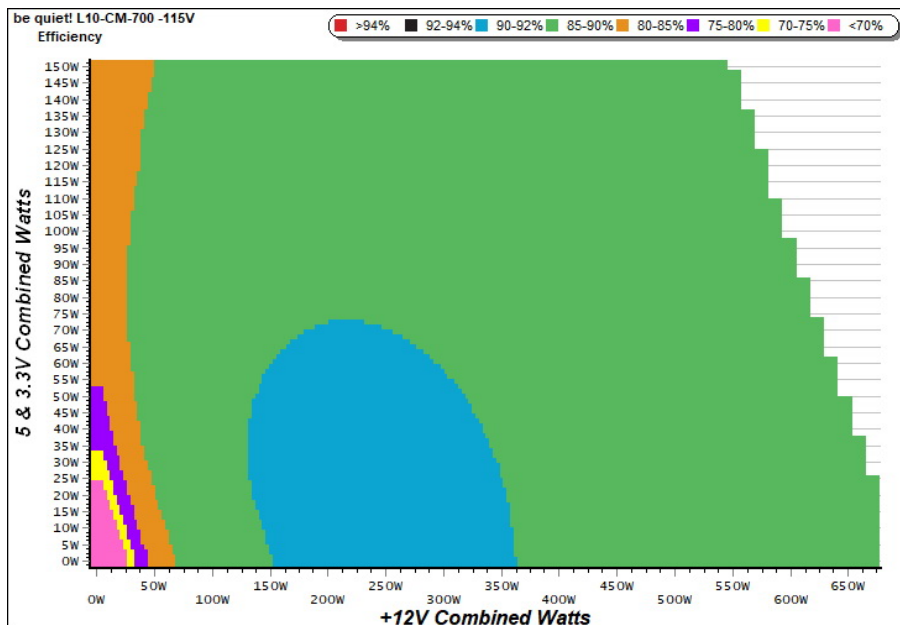
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	48.932%	0.028
	5.086V	0.468		230.25V
2	0.090A	0.458	62.398%	0.043
	5.085V	0.734		230.25V
3	0.550A	2.792	77.837%	0.174
	5.075V	3.587		230.25V
4	1.000A	5.066	78.640%	0.248
	5.066V	6.442		230.24V
5	1.500A	7.584	78.282%	0.294
	5.055V	9.688		230.24V
6	3.000A	15.074	79.345%	0.354
	5.024V	18.998		230.25V

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115V

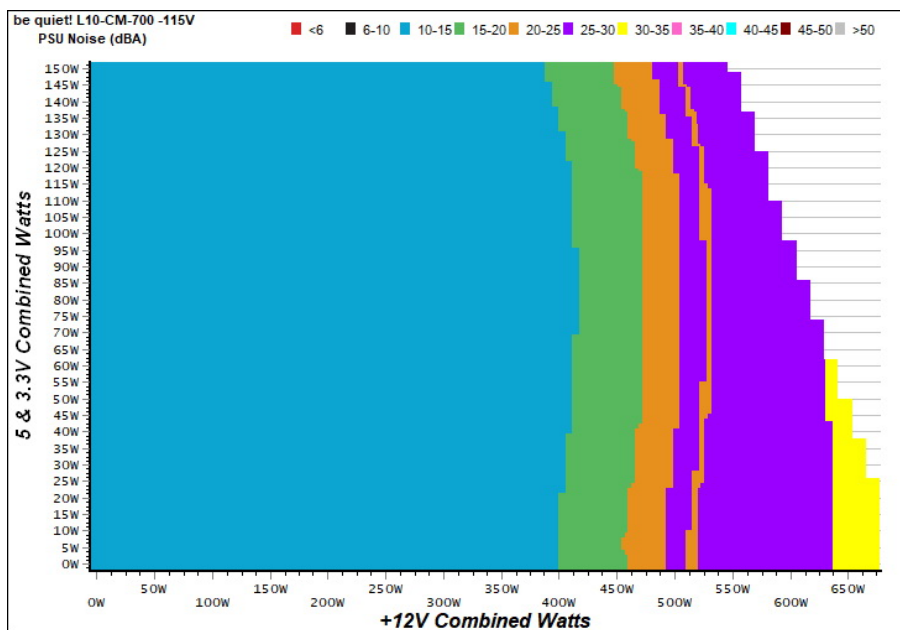
EFFICIENCY GRAPH 115V



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

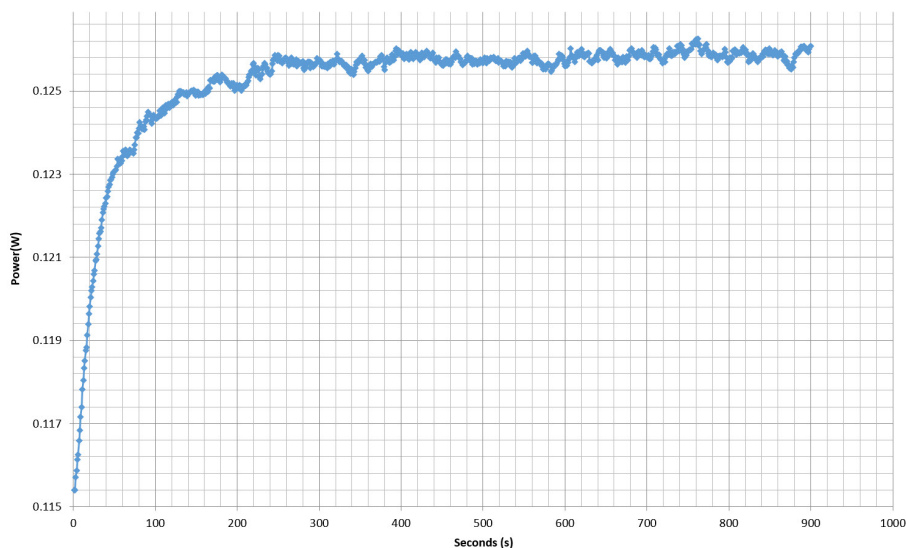
The PSU's noise in its entire operational range and under 30-32 °C (+2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 275S8251000034 - 22/04/2019 - 11:39



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

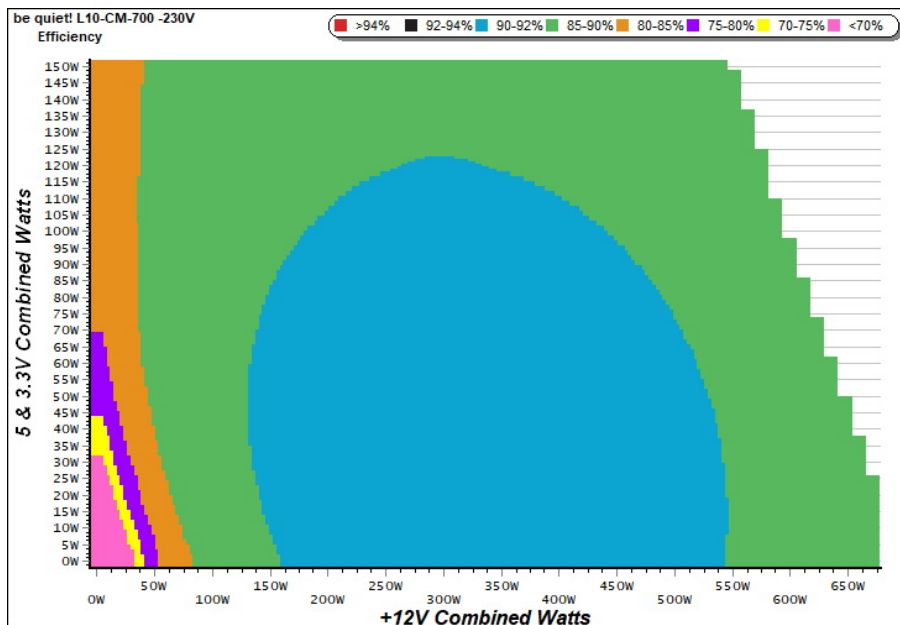
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230V

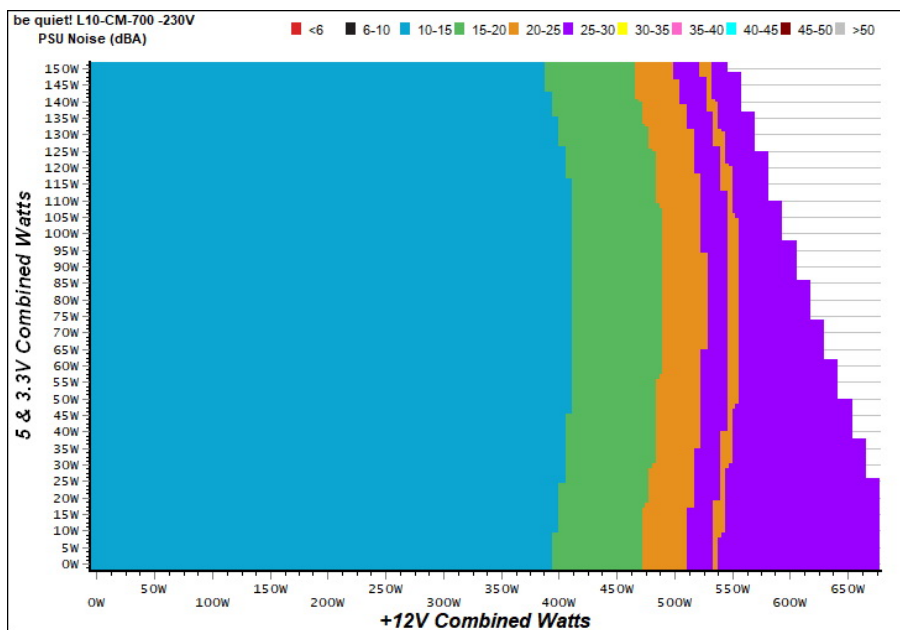
EFFICIENCY GRAPH 230V



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NOISE GRAPH 230V



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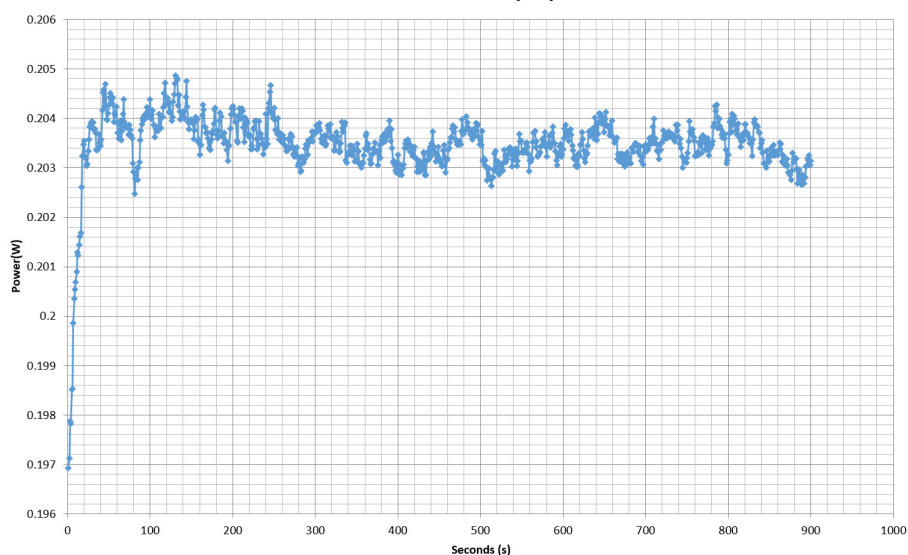
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VAMPIRE POWER -230V

Power - 27558251000034 - 22/04/2019 - 11:39



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COMMISSION REGULATION (EU) NO 617/2013 TESTING 230V

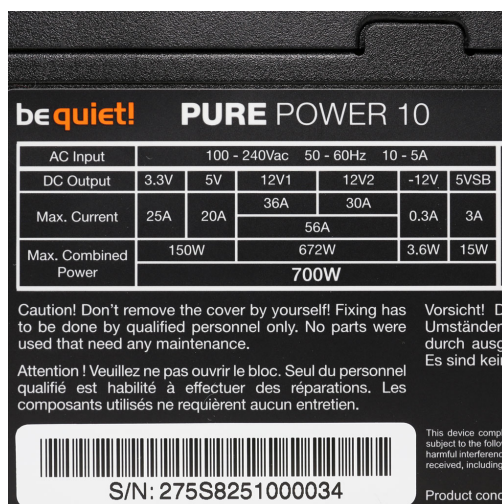
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Power specifications label

CERTIFICATIONS 115V



Aris Mpitsiopoulos
Lab Director

CERTIFICATIONS 230V



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