be quiet!

be quiet! Pure Power 13 M 650W

Serial Number 025EUS508001373

Lab ID BQ65002848

Certification ID 252848

Test Result Report ID: 25PS2848A

Certificate Issue Date: Jun 17, 2025

Scheme: ETA-EMI PSU

115V CYBENETICS PLATINUM

230V CYBENETICS PLATINUM 230v

Scheme: LAMBDA PSU

115V CYBENETICS A++

230V CYBENETICS A++ 230v

CYBENETICS ATX 3.1 PASS

Outside Validation Scope

General Information

Test Equipment

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 Chroma 63640-80-80 x10 Chroma 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P, GW Instek ASR-3500
Power Analyzers	Rohde & Schwarz HMC8015 & NPA701
Oscilloscopes	Picoscope 4444, 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
EMI Analyzer	TekBox TBMR-110M-EU
Isolation Transformer	4kVA
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Testing Methodology	Cybenetics PSU Test Protocol

DUT Information(Non-accredited measurements)

Product Identification Details	
Brand	be quiet!
Model	Pure Power 13 M 650W
OEM/ODM	FSP
Serial Number	025EUS508001373
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	5-10

Rated Frequency (Hz)	50-60
Rated Power (W)	650
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Rifle Bearing Fan (BQ QF2-12025-MS)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	BQ65002848
Date of receipt	May 9, 2025
Testing Date	Jun 12, 2025
Report Issued Date	Jun 17, 2025
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Modular Cables				
Description	**Cable Count**	**Connector Count (Total)**	**Gauge**	In Cable Capacitors
ATX connector 24 pin (550mm)	1	1	18-22AWG	No
4+4 pin EPS12V (650mm)	1	1	18AWG	No
4-pin ATX12V (650mm)	1	1	18AWG	No
2x 6+2 pin PCIe (500mm)	2	2	18AWG	No
12+4 pin PCIe (600mm) (450W)	1	1	16-28AWG	No
SATA (500mm+150mm+150mm)	1	3	18AWG	No
SATA (510mm+150mm) / 4-pin Molex (+150mm+145mm)	1	2 / 2	18AWG	No

AC Power Cord (1350mm) - C13 Coupler	1	1	18AWG	-

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓
Inrush Current Protection	✓
Fan Failure Protection	✗

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	54.1	3	0.3
	Watts	120		650	15	3.6
Total Max. Power (W)		650				

Parts Description

General Data	
Manufacturer (OEM)	FSP
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor & Relay
Bridge Rectifier(s)	2x Yangjie GBJ1508 (800V, 15A @ 87°C)
APFC MOSFETs	2x Toshiba TK20A60W (600V, 20A @ 25°C, Rds(on): 0.155Ohm)
APFC Boost Diode	1x DSC06C065 (650V, 6A @ 25°C)

Bulk Cap(s)	1x Elite (420V, 330uF, 2000h @ 105°C, PL(M)) & 1x Elite (420V, 270uF, 3000h @ 85°C, GSF(M))
Main Switchers	2x STMicroelectronics STF24N60DM2 (650V, 11A @ 25°C, Rds(on): 0.200Ohm)
IC Driver	Novosense NSI6602
APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CM6901X
Topology	Primary side: APFC, Half-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters
Secondary Side	
+12V MOSFETs	4x Secos SPR170N04SV-C (40V, 94A @ 100°C, Rds(on): 1.8mOhm)
5V & 3.3V	DC-DC Converters: 4x Nexperia PSMN3RO-30YLD (30V, 100A @ 25°C, Rds(on): 3.1mOhm) PWM Controller(s): ANPECAPW7159C
Filtering Capacitors	Electrolytic: 1x Rubycon (6-10,000 @ 105°C, ZLH) 3x Elite (2,000 @ 105°C, EL) 2x Elite (2-5,000 @ 105°C, ED) 1x Elite (4-10,000 @ 105°C, EY) 1x Elite (3-6,000 @ 105°C, EV) Polymer: 19x Apaq, 8 Elite (CS), 9x Biostar
Supervisor IC	IN1S4241-SDG (OCP, OVP, UVP, SCP, PG)
Fan Controller	Grenergy GR8031
Fan Model	BQ QF2-12025-MS (120mm, 12V, 0.20A, Rifle Bearing Fan)
5VSB Circuit	
Synchronous Rectification Driver	Leadtrend LD8926AA13 Synchronous Rectification IC

Test Results

Temperature & Compliance Info

Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	90.778%
Average Noise Output (>1450 Load Combinations)	6.34dBA
Average PF (>1450 Load Combinations)	0.990
Efficiency With 10W (≤500W) or 2% (>500W) Load	69.790%
Standby Power Consumption	0.0432W
Non-Accredited	
12V Ripple (Full Load)	28.81mV
5V Ripple (Full Load)	16.04mV
3.3V Ripple (Full Load)	16.19mV
5VSB Ripple (Full Load)	19.99mV
12V Load Regulation	0.44%
5V Load Regulation	1.12%
3.3V Load Regulation	1.41%
5VSB Load Regulation	2.10%
Inrush Current	32.110A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.584%
Average Noise Output (>1450 Load Combinations)	6.32dBA
Average PF (>1450 Load Combinations)	0.954
Efficiency With 10W (≤500W) or 2% (>500W) Load	69.888%
Standby Power Consumption	0.1157W
Non-Accredited	
12V Ripple (Full Load)	28.53mV
5V Ripple (Full Load)	16.05mV
3.3V Ripple (Full Load)	15.56mV

5VSB Ripple (Full Load)	21.41mV	
12V Load Regulation	0.47%	
5V Load Regulation	1.12%	
3.3V Load Regulation	1.41%	
5VSB Load Regulation	2.08%	
Inrush Current	67.760A	
12V Transient Response (200%)	11.70V	
5V Transient Response (200%)	4.954V	
3.3V Transient Response (200%)	3.254V	
5VSB Transient Response (200%)	4.997V	
Hold-Up Time & PWR_OK Signal	21.10ms	
AC Loss to PWR_OK Hold Up Time	18.10ms	
PWR_OK Inactive to DC Loss Delay	3.00ms	
PSU Timings: T1 (20% / 100%)	71.0ms	69.0ms
PSU Timings: T3 (20% / 100%)	142.0ms	141.0ms
12V OCP (28.8°C / 41.8°C)	66.00A (122.00%), 12.151V	62.60A (115.71%), 12.161V
5V OCP (28.8°C / 41.8°C)	28.7A (143.50%), 5.009V	28A (140.00%), 5.01V
3.3V OCP (28.8°C / 41.8°C)	29.3A (146.50%), 3.337V	28.7A (143.50%), 3.338V
5VSB OCP (28.8°C / 41.8°C)	4.2A (140.00%), 5.036V	4.2A (140.00%), 5.036V
OPP (29.17°C / 43.04°C)	123.55%	120.16%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	21.1
AC Loss to PWR_OK Hold Up Time (ms)	18.1
PWR_OK Inactive to DC Loss Delay (ms)	3

Vampire Power

Tables

115V

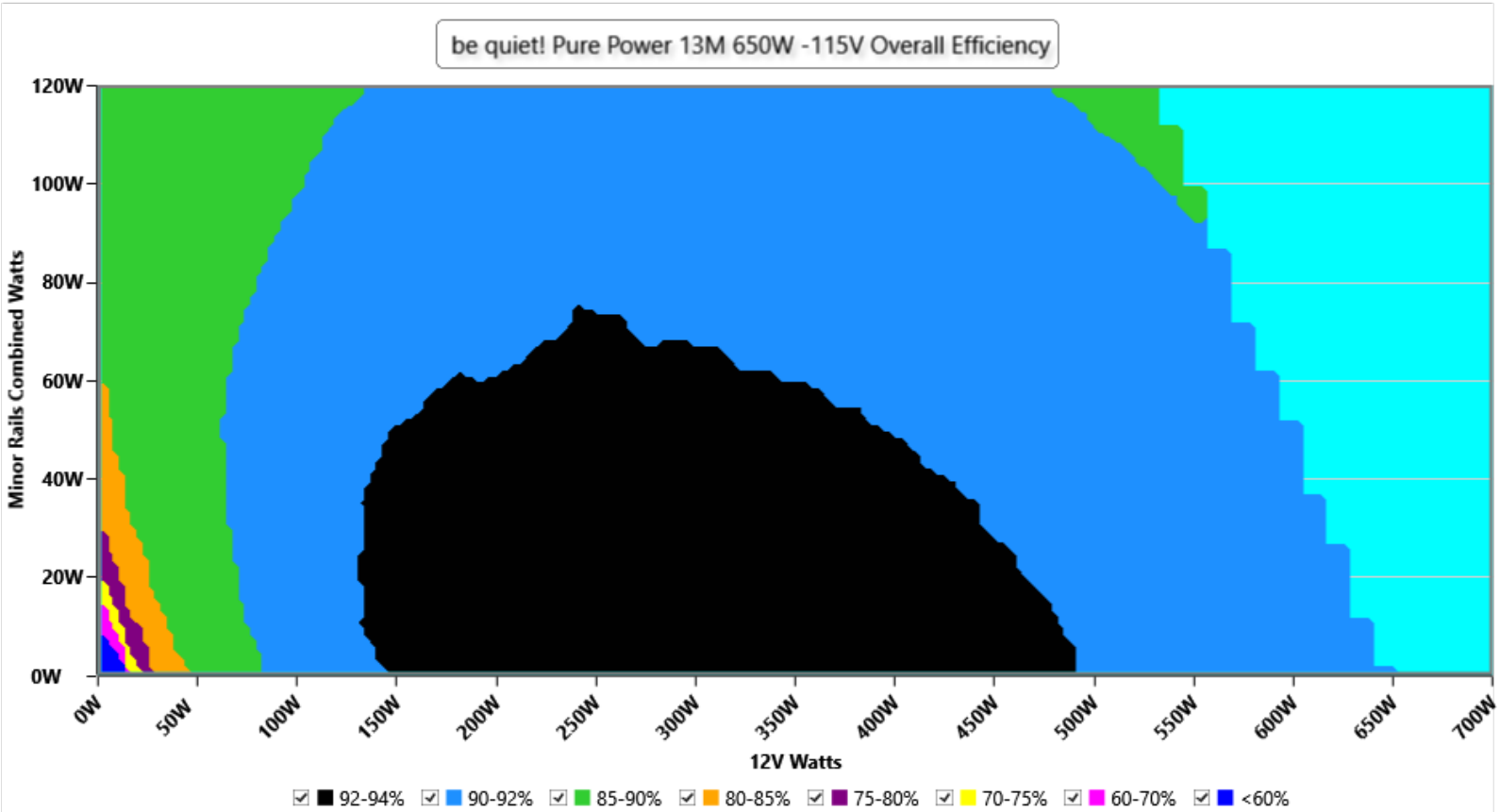
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.08 V	115.04 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.18 %	2.00 %	PASS
Real Power:	0.043 W	-0.000 W	N/A	0.077 W	N/A	N/A
Apparent Power:	9.921 W	9.874 W	N/A	9.971 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.90 V	228.48 V	227.70 V	232.01 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.426	1.490	PASS
Mains Voltage THD:	0.14 %	0.11 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.116 W	0.039 W	N/A	0.184 W	N/A	N/A
Apparent Power:	38.236 W	37.843 W	N/A	38.835 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

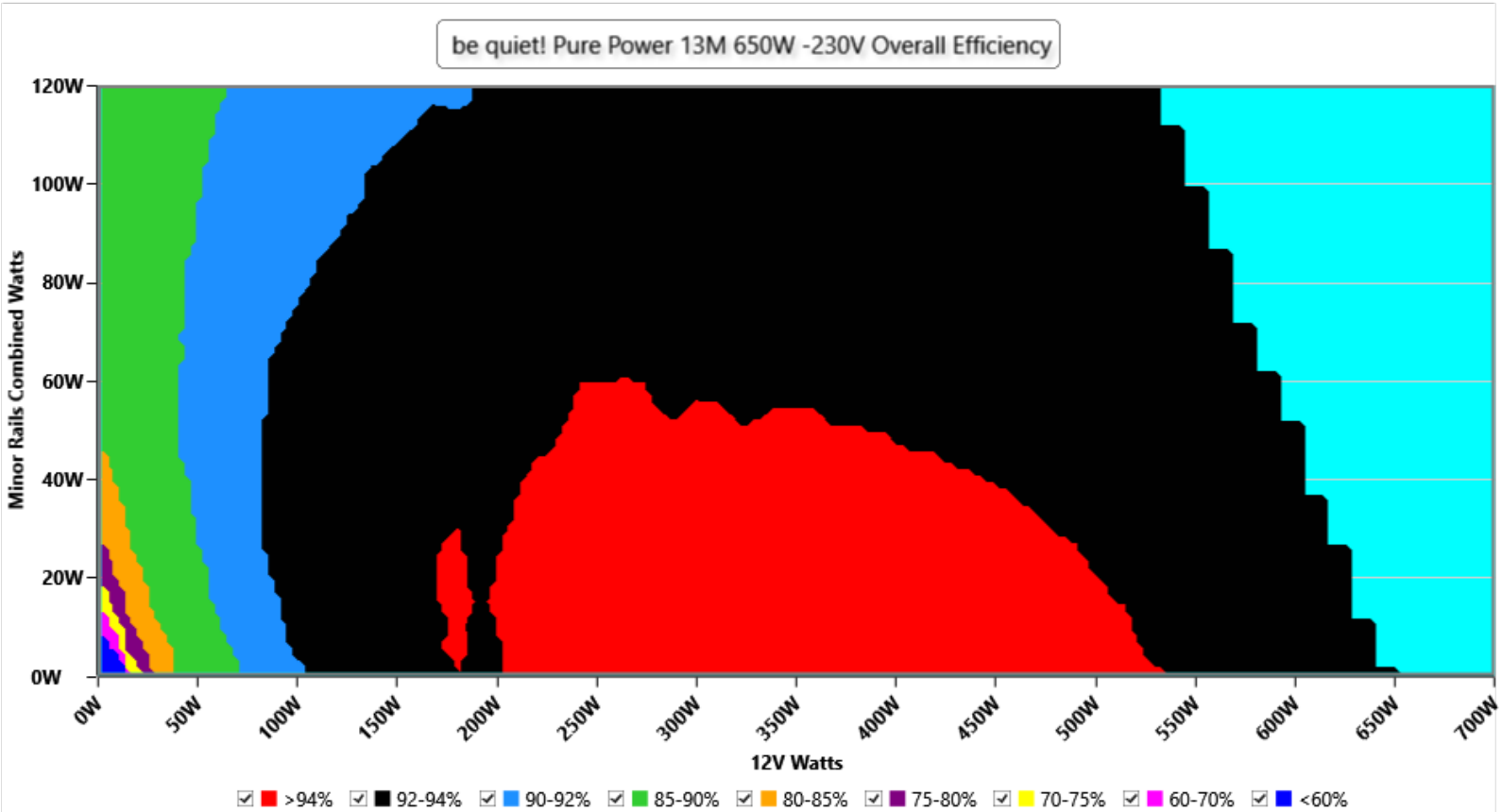
115V



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

230V

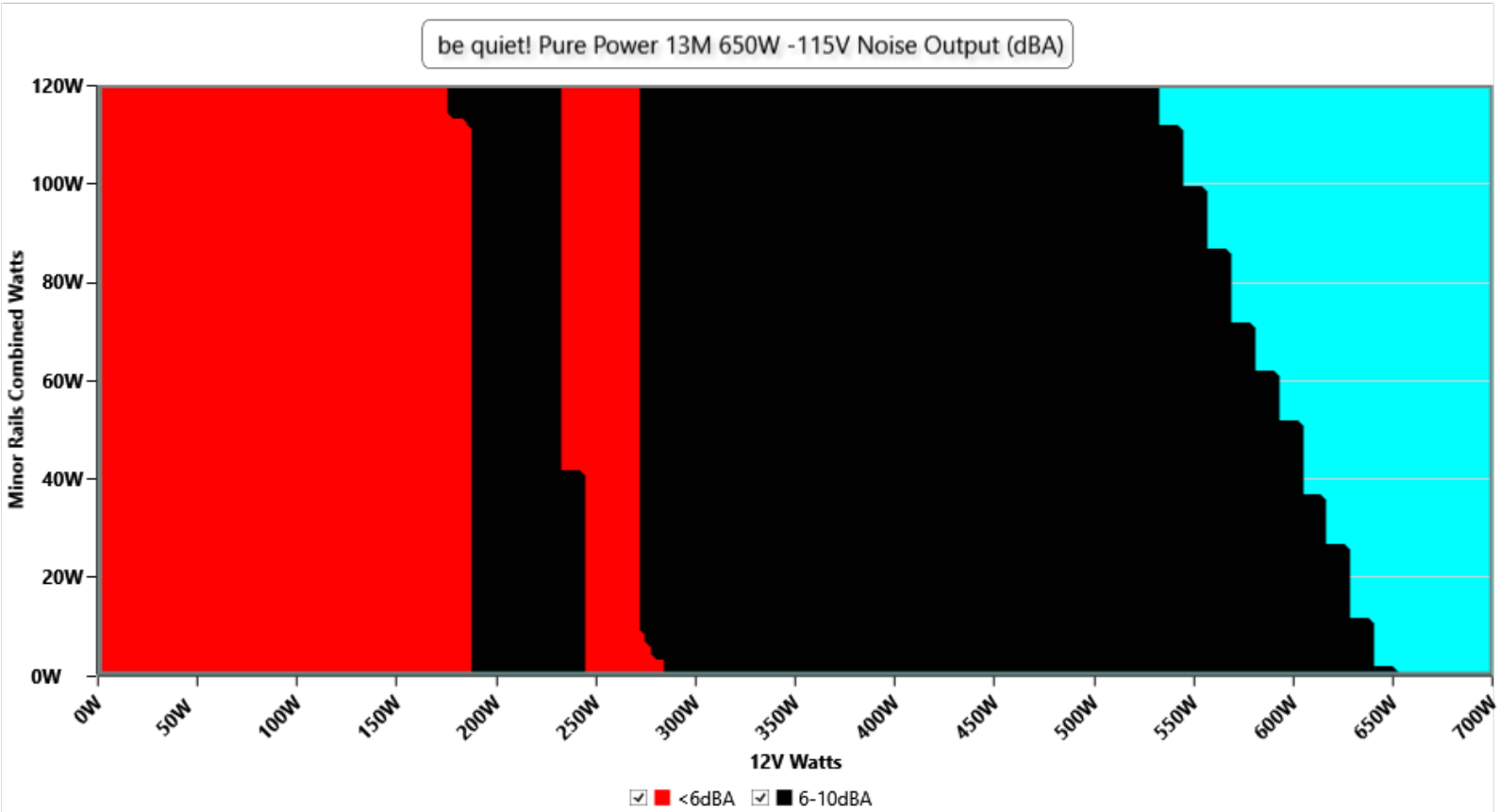


INFO

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

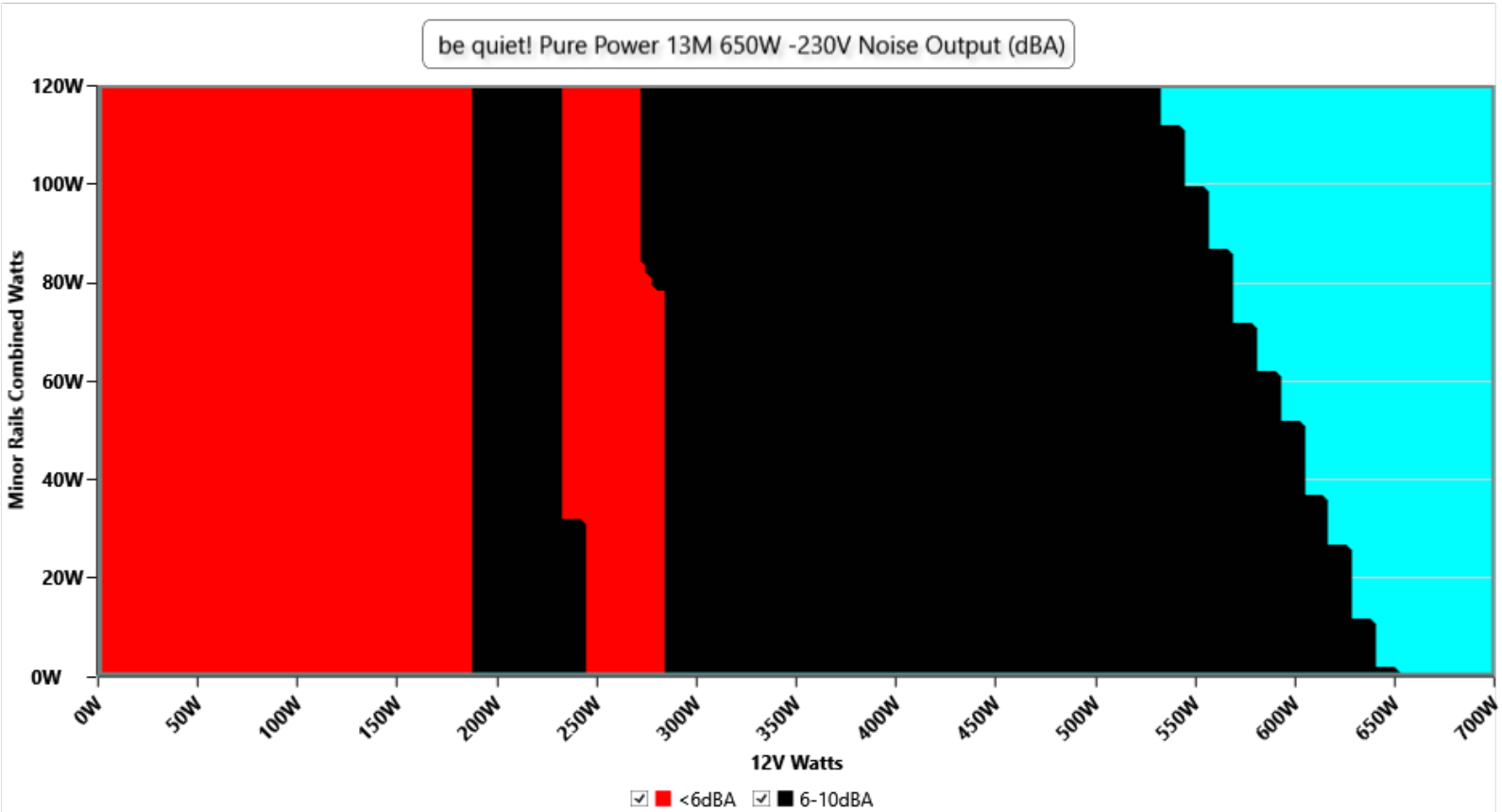
115V



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

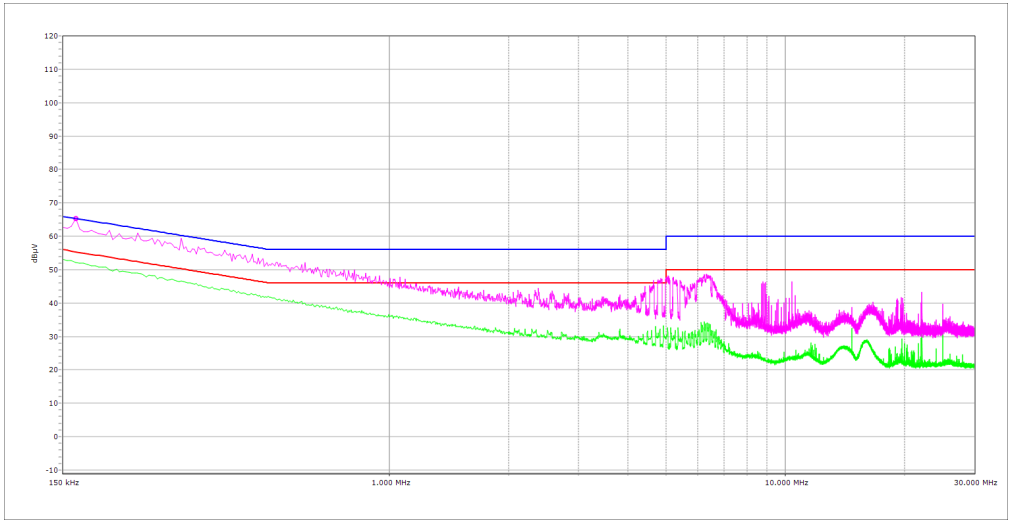
230V



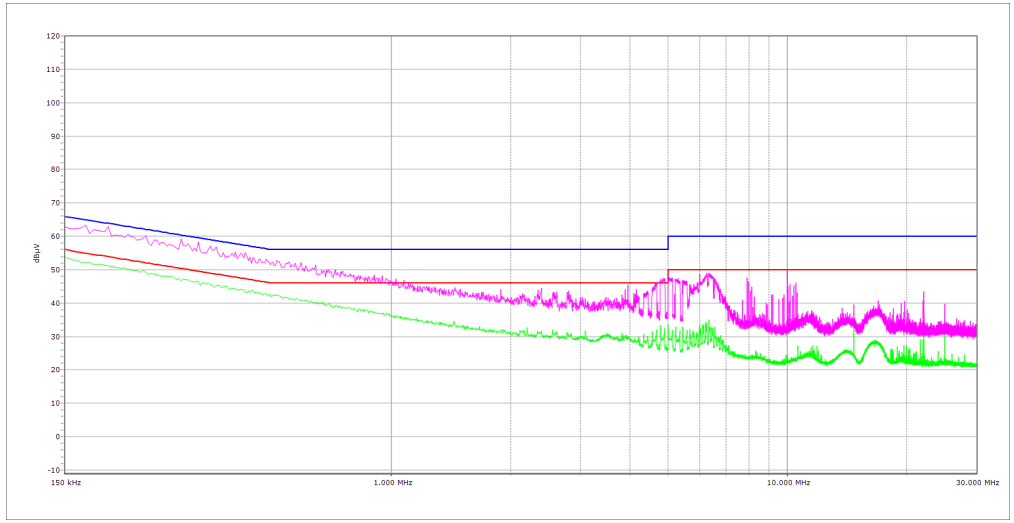
INFO

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

Conducted Emissions EN 55032 & CISPR 32



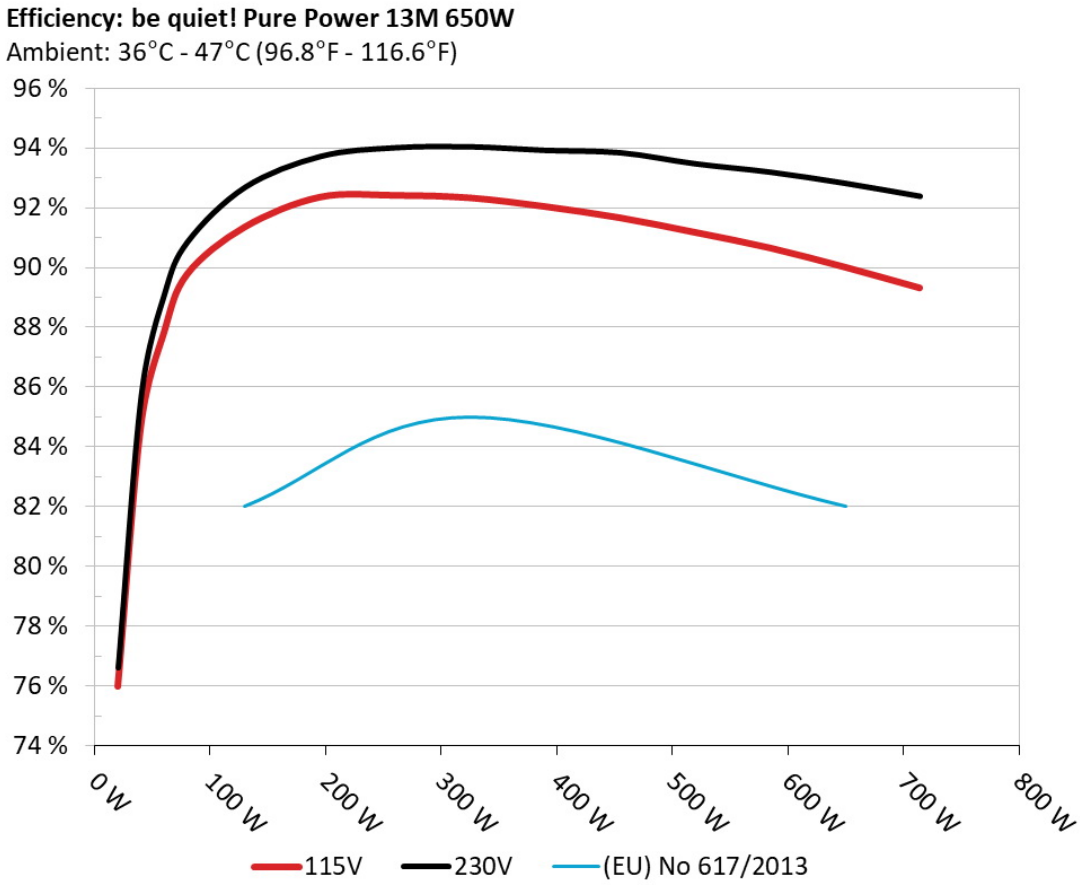
NEUTRAL



PHASE

Indicative Performance

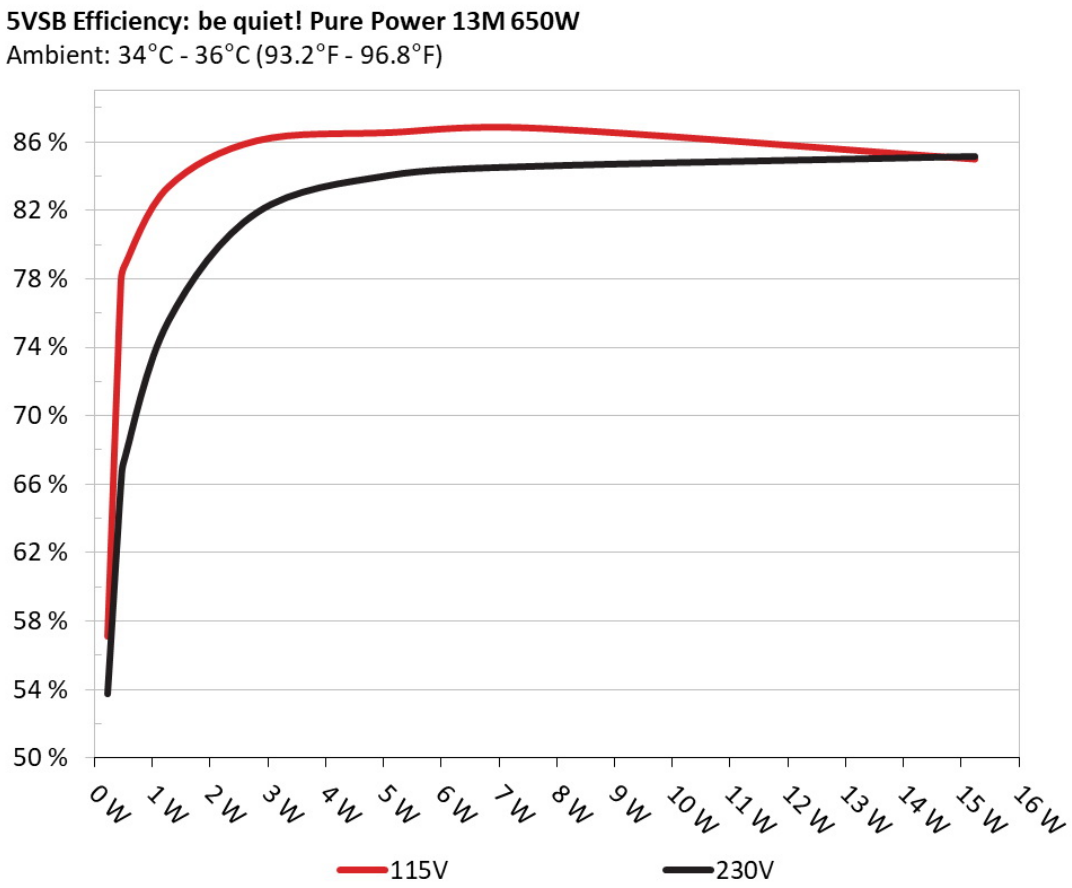
Efficiency under high ambient temperature



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



INFO

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

5VSB Efficiency (ERP LOT 3/6 & CEC)

115V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.231W	57.082%	0.025
	5.129V	0.252W		114.91V
2	**0.09A**	0.462W	77.925%	0.058
	5.128V	0.593W		114.91V
3	**0.55A**	2.816W	86.091%	0.257
	5.12V	3.271W		114.91V
4	**1A**	5.112W	86.562%	0.361
	5.112V	5.906W		114.91V
5	**1.5A**	7.655W	86.818%	0.41
	5.103V	8.818W		114.92V
6	**3A**	15.23W	85.009%	0.486
	5.077V	17.915W		114.91V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.231W	53.745%	0.013
	5.129V	0.43W		229.93V
2	**0.09A**	0.462W	66.05%	0.02
	5.128V	0.7W		229.91V
3	**0.55A**	2.816W	81.867%	0.096
	5.12V	3.438W		229.9V
4	**1A**	5.112W	84.039%	0.161
	5.112V	6.083W		229.89V
5	**1.5A**	7.656W	84.569%	0.22
	5.103V	9.054W		229.89V
6	**3A**	15.23W	85.138%	0.316
	5.077V	17.888W		229.89V

Protection Features

OCP (Normal @ 28.8°C)	12V: 66.00A (122.00%), 12.151V 5V: 28.7A (143.50%), 5.009V 3.3V: 29.3A (146.50%), 3.337V 5VSB: 4.2A (140.00%), 5.036V
OCP (Hot @ 41.8°C)	12V: 62.60A (115.71%), 12.161V 5V: 28A (140.00%), 5.01V 3.3V: 28.7A (143.50%), 3.338V 5VSB: 4.2A (140.00%), 5.036V
OPP (Normal @ 29.2°C)	803.07W (123.55%)
OPP (Hot @ 43.0°C)	781.02W (120.16%)
OTP	✓ (154°C @ Heat Sink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
UVP (Full Load @ 90V)	✓
UVP (No Damage @ 80V)	✓
Conducted Emissions EN55032 & CISPR 32	✓
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & Bypass Relay

Supplementary Tests (For Reference)

Typical 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%	**3.556A**	**1.975A**	**1.96A**	**0.983A**	65.003	87.866%	0	<6.0	50.11°C	0.973
	12.207V	5.063V	3.368V	5.088V	73.98				40.33°C	114.9V
20%	**8.117A**	**2.966A**	**2.944A**	**1.182A**	129.94	91.37%	0	<6.0	49.23°C	0.979
	12.202V	5.057V	3.363V	5.078V	142.214				40.7°C	114.87V
30%	**13.027A**	**3.464A**	**3.439A**	**1.381A**	194.943	92.369%	0	<6.0	51°C	0.986
	12.197V	5.052V	3.359V	5.07V	211.048				41.14°C	114.85V
40%	**17.955A**	**3.963A**	**3.937A**	**1.581A**	260.03	92.429%	657	7.1	41.57°C	0.991
	12.188V	5.047V	3.353V	5.061V	281.327				49.13°C	114.83V
50%	**22.540A**	**4.96A**	**4.931A**	**1.782A**	325.024	92.345%	659	7.3	42.03°C	0.993
	12.179V	5.041V	3.346V	5.051V	351.97				50.44°C	114.81V
60%	**27.072A**	**5.959A**	**5.927A**	**1.984A**	389.381	92.057%	662	7.6	42.57°C	0.995
	12.174V	5.035V	3.341V	5.042V	422.975				51.73°C	114.79V
70%	**31.685A**	**6.961A**	**6.925A**	**2.186A**	454.7	91.681%	664	7.8	43.37°C	0.996
	12.169V	5.029V	3.336V	5.033V	495.957				54.36°C	114.76V
80%	**36.304A**	**7.963A**	**7.925A**	**2.289A**	519.485	91.193%	666	7.9	43.52°C	0.997
	12.163V	5.023V	3.331V	5.025V	569.655				56.41°C	114.74V
90%	**41.323A**	**8.468A**	**8.415A**	**2.392A**	584.909	90.668%	669	8.1	44.76°C	0.997
	12.158V	5.018V	3.327V	5.017V	645.116				59.59°C	114.72V
100%	**46.083A**	**8.976A**	**8.937A**	**3A**	649.737	90.027%	850	16.5	45.11°C	0.998
	12.153V	5.013V	3.323V	5.001V	721.719				62.55°C	114.69V
110%	**50.719A**	**9.985A**	**10.038A**	**3.003A**	714.377	89.332%	1013	21.8	46.33°C	0.998
	12.147V	5.007V	3.318V	4.995V	799.687				64.61°C	114.67V
CL1	**0.115A**	**14.372A**	**14.293A**	**0A**	121.288	85.723%	668	8.1	40.43°C	0.979
	12.197V	5.023V	3.338V	5.092V	141.488				55.4°C	114.88V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	**0.113A**	**19.868A**	**0A**	**0A**	101.347	84.093%	665	7.8	40.18°C	0.979
	12.201V	5.031V	3.359V	5.097V	120.519				51.37°C	114.88V
CL3	**0.113A**	**0A**	**19.717A**	**0A**	67.396	80.175%	662	7.6	40.39°C	0.983
	12.201V	5.042V	3.348V	5.098V	84.062				48.39°C	114.91V
CL4	**53.424A**	**0A**	**0A**	**0A**	649.552	90.968%	671	8.4	45.23°C	0.998
	12.158V	5.039V	3.349V	5.061V	714.05				57.99°C	114.71V

The results above are not used in the certification process

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%	**3.556A**	**1.975A**	**1.959A**	**0.983A**	65.003	89.147%	0	<6.0	47.03°C	0.791
	12.207V	5.063V	3.368V	5.088V	72.917				40.22°C	229.88V
20%	**8.117A**	**2.967A**	**2.944A**	**1.181A**	129.936	92.678%	0	<6.0	47.79°C	0.915
	12.202V	5.056V	3.363V	5.079V	140.199				40.78°C	229.87V
30%	**13.027A**	**3.464A**	**3.438A**	**1.381A**	194.935	93.709%	659	7.3	41.39°C	0.949
	12.196V	5.052V	3.359V	5.07V	208.024				45.56°C	229.86V
40%	**17.959A**	**3.963A**	**3.938A**	**1.581A**	260.017	94.001%	659	7.3	41.54°C	0.964
	12.185V	5.047V	3.352V	5.061V	276.612				44.79°C	229.85V
50%	**22.542A**	**4.96A**	**4.931A**	**1.782A**	325.008	94.031%	661	7.4	42.38°C	0.972
	12.178V	5.041V	3.346V	5.052V	345.639				45.8°C	229.84V
60%	**27.076A**	**5.959A**	**5.927A**	**1.983A**	389.359	93.914%	662	7.6	42.98°C	0.978
	12.171V	5.035V	3.341V	5.043V	414.595				45.86°C	229.83V
70%	**31.715A**	**6.961A**	**6.93A**	**2.185A**	454.74	93.833%	641	8.1	43.14°C	0.98
	12.159V	5.029V	3.334V	5.034V	484.715				46.19°C	227.45V
80%	**36.320A**	**7.964A**	**7.928A**	**2.289A**	519.586	93.465%	657	7.1	43.92°C	0.983
	12.161V	5.022V	3.331V	5.025V	555.905				48.7°C	229.81V
90%	**41.339A**	**8.469A**	**8.418A**	**2.392A**	585.013	93.182%	665	7.8	44.08°C	0.985
	12.155V	5.018V	3.327V	5.018V	627.818				49.92°C	229.79V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**46.101A**	**8.977A**	**8.94A**	**3A**	649.841	92.809%	751	11.8	45.43°C	0.987
	12.150V	5.012V	3.323V	5.001V	700.193				51.62°C	229.81V
110%	**50.737A**	**9.987A**	**10.04A**	**3.004A**	714.48	92.376%	949	21.6	46.86°C	0.988
	12.144V	5.006V	3.317V	4.994V	773.447				52.88°C	229.77V
CL1	**0.115A**	**14.374A**	**14.296A**	**0A**	121.3	86.972%	667	7.9	41.78°C	0.915
	12.195V	5.022V	3.337V	5.092V	139.474				49.03°C	229.86V
CL2	**0.115A**	**19.87A**	**0A**	**0A**	101.354	85.171%	666	7.9	41.1°C	0.892
	12.202V	5.03V	3.359V	5.097V	118.993				47.09°C	229.91V
CL3	**0.115A**	**0A**	**19.717A**	**0A**	67.408	81.029%	664	7.8	41.44°C	0.826
	12.203V	5.041V	3.348V	5.098V	83.191				45.43°C	229.89V
CL4	**53.440A**	**0A**	**0A**	**0A**	649.68	93.58%	670	8.3	45.03°C	0.986
	12.157V	5.038V	3.349V	5.06V	694.252				50.15°C	229.78V

The results above are not used in the certification process

Light 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	**1.218A**	**0.493A**	**0.49A**	**0.196A**	20.001	75.994%	0	<6.0	41.63°C	0.861
	12.200V	5.069V	3.369V	5.106V	26.317				36.04°C	114.91V
40W	**2.678A**	**0.691A**	**0.686A**	**0.294A**	39.999	84.737%	0	<6.0	45.16°C	0.945
	12.204V	5.068V	3.37V	5.102V	47.204				37.67°C	114.9V
60W	**4.140A**	**0.888A**	**0.881A**	**0.392A**	59.998	87.842%	0	<6.0	46.71°C	0.97
	12.204V	5.066V	3.369V	5.099V	68.303				38.86°C	114.9V
80W	**5.598A**	**1.086A**	**1.077A**	**0.491A**	79.945	89.789%	0	<6.0	47.79°C	0.985
	12.204V	5.065V	3.369V	5.096V	89.036				39.09°C	114.89V

The results above are not used in the certification process

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	**1.218A**	**0.493A**	**0.49A**	**0.196A**	20.005	76.598%	0	<6.0	40.18°C	0.457
	12.201V	5.068V	3.37V	5.105V	26.116				36.08°C	229.91V
40W	**2.679A**	**0.691A**	**0.685A**	**0.294A**	40.004	85.721%	0	<6.0	43.37°C	0.655
	12.203V	5.067V	3.37V	5.102V	46.668				37.67°C	229.91V
60W	**4.140A**	**0.888A**	**0.881A**	**0.392A**	60.001	89.099%	0	<6.0	44.44°C	0.768
	12.204V	5.066V	3.369V	5.099V	67.343				38.13°C	229.89V
80W	**5.598A**	**1.086A**	**1.077A**	**0.491A**	79.948	90.846%	0	<6.0	45.63°C	0.838
	12.204V	5.064V	3.369V	5.096V	88.004				39.07°C	229.88V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	25.89mV	15.99mV	16.78mV	17.49mV	Pass
20% Load	26.91mV	15.02mV	15.76mV	16.93mV	Pass
30% Load	25.73mV	15.78mV	16.57mV	17.70mV	Pass
40% Load	25.02mV	16.04mV	16.98mV	17.03mV	Pass
50% Load	25.63mV	17.11mV	17.14mV	18.36mV	Pass
60% Load	27.93mV	16.71mV	16.73mV	20.05mV	Pass
70% Load	27.47mV	16.40mV	17.14mV	20.97mV	Pass
80% Load	28.50mV	16.81mV	17.95mV	23.07mV	Pass
90% Load	28.04mV	16.35mV	16.73mV	24.35mV	Pass
100% Load	28.81mV	16.04mV	16.19mV	19.99mV	Pass
110% Load	29.86mV	15.20mV	15.78mV	20.69mV	Pass
Crossload1	25.93mV	15.52mV	16.62mV	17.75mV	Pass
Crossload2	27.42mV	17.88mV	16.32mV	18.72mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	26.40mV	16.50mV	18.77mV	19.08mV	Pass
Crossload4	28.51mV	15.82mV	15.87mV	17.64mV	Pass

The results above are not used in the certification process

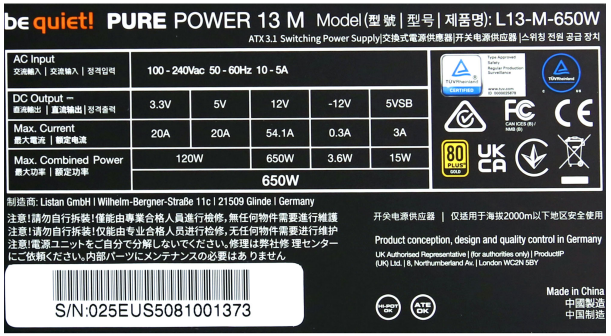
230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.96mV	15.89mV	16.52mV	16.83mV	Pass
20% Load	28.75mV	15.38mV	16.06mV	17.39mV	Pass
30% Load	31.36mV	16.55mV	17.39mV	17.75mV	Pass
40% Load	25.12mV	16.14mV	16.22mV	16.42mV	Pass
50% Load	27.22mV	15.99mV	17.24mV	17.90mV	Pass
60% Load	26.81mV	16.20mV	16.57mV	19.08mV	Pass
70% Load	54.08mV	16.81mV	17.04mV	21.89mV	Pass
80% Load	29.47mV	16.45mV	17.39mV	22.40mV	Pass
90% Load	29.88mV	17.42mV	16.73mV	25.01mV	Pass
100% Load	28.53mV	16.05mV	15.56mV	21.41mV	Pass
110% Load	30.56mV	14.97mV	16.87mV	20.10mV	Pass
Crossload1	26.55mV	15.36mV	15.55mV	17.18mV	Pass
Crossload2	28.29mV	17.73mV	15.96mV	18.52mV	Pass
Crossload3	27.52mV	16.19mV	17.65mV	18.98mV	Pass
Crossload4	24.48mV	15.20mV	15.62mV	16.09mV	Pass

The results above are not used in the certification process

be quiet! Pure Power 13 M 650W

Top side



Power specifications label

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

› It should be mentioned that the test results are provided by Cybenetics

› The link to the original test results document should be provided in any case

Cybenetics runs voluntary certification programs for power supplies - ETA for efficiency, LAMBDA for noise and SAFE for safety and correct operation - and for cooling products, with DELTA for chassis soundproofing and PHI for fan airflow and static pressure. THETA rates cooler performance on AMD AM5 and Intel LGA1851 outside ISO 17065 and accreditation scope

CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

www.cybenetics.com - info@cybenetics.com