



Corsair HX1000i (ATX v3.1)

23107103000056841411

Lab ID CR10002513

Certification ID 252513

Test Result Report ID: 24PS2513A

Certificate Issue Date: Jul 24, 2024

Scheme: ETA-EMI PSU

115V



230V



115V



230V



Scheme: LAMBDA PSU



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		Corsair
Model		HX1000i (ATX v3.1)
OEM/ODM		Channel Well Technology
Serial Number		23107103000056841411
Product Specifications		
Manufacturer-Provided Information		
 (Vrms)	100-240	
 (Arms)	13-6.5	

□□□ (Hz)	47-63
□□□ (W)	1000
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	140mm Fluid Dynamic Bearing Fan (NR140P)
□□□□	✓
Cybenetics Testing Information	
Lab ID	CR10002513
Date of receipt	Jul 4, 2024
Testing Date	Jul 22, 2024
Report Issued Date	Jul 24, 2024
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

□□□□				
□□	□□□	□□□□	Gauge	In Cable Capacitors
ATX □□ 24 pin (610mm)	1	1	16-18AWG	□
4+4 pin EPS 12V □□ (650mm)	2	2	16AWG	□
6+2pin PCIe□□ (675mm+110mm)	2	4	16-18AWG	□
12+2 pin PCIe (650mm) (600W)	1	1	16-18AWG	□
SATA□□ (455mm+115mm+115mm+115mm)	2	8	18AWG	□
□ 4pin Molex□□ (450mm+100mm+100mm+100mm)	2	8	18AWG	□
USB Type C to Motherboard Header Cable (520mm)	1	1	24-28AWG	□

AC Power Cord (1390mm) - C13 coupler	1	1	16AWG	-
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Protection Features(Manufacturer)

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

	3.3V	5V	12V	5VSB	-12V
	25	25	83.3	3	0.3
	150	999.6	15	3.6	
(W)	1000				

Parts Description

General Data	
Manufacturer (OEM)	CWT
PCB Type	Double-Sided
Primary Side	
Transient Filter	6x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1xCM02X (Discharge IC)
Inrush Protection	1x NTC Thermistor SCK20-150 (15 Ohm) & Relay
Bridge Rectifier(s)	2x LL25XB60 (600V, 25A @ 113°C)
APFC MOSFETs	2x Infineon IPW60R099P6 (600V, 24A @ 100°C, Rds(on): 0.099Ohm)
APFC Boost Diode	2x Infineon IDH08G65C6 (650V, 8A @ 145°C)

Bulk Cap(s)	1x Nippon Chemi-Con (420V, 470uF, 2,000h @ 105°C, KMZ) & 1x Nippon Chemi-Con (420V, 560uF, 2,000h @ 105°C, KMR)
Main Switchers	2x Infineon IPW60R099P6 (600V, 24A @ 100°C, Rds(on): 0.099Ohm)
Digital Controllers	2x Texas Instruments UCD3138A
MCU	Microchip PIC32MM0064GPM036
Topology	Primary side: Semi-Digital, Interleaved PFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	10x Infineon BSC014N04LS (40V, 125A @ 100°C, Rds(on): 1.4mOhm)
5V & 3.3V	DC-DC Converters: 6x UBIQ QM3054M6 (30V, 61A @ 100°C, Rds(on): 4.8mOhm) PWM Controller(s): uPI-SemiuP3861P
Filtering Capacitors	Electrolytic: 1x Nichicon (2-5,000h @ 105°C, HD), 2x Nippon Chemi-Con (1-5,000h @ 105°C, KZE), 4x Nippon Chemi-Con (4-10,000h @ 105°C, W), 6x Rubycon (4-10,000h @ 105°C,ZLH), 2x Rubycon (4-10,000h @ 105°C, YXJ), 1x Rubycon (2-10,000h @ 105°C, YXF) Polymer: 20x United Chemi-Con, 20x FPCAP, 1x Rubycon (YXF)
Supervisor IC	Weltrend WT7502R (OVP, UVP, SCP, PG)
Driver IC	2x Texas Instruments UCC27324-Q1
Fan Controller	Microchip PIC32MM0064GPM036
Fan Model	Corsair NR140P (140mm, 12V, 0.22A, Fluid Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	1x Silan SVF4N65RD (650V, 2.5A @ 100°C, Rds(on): 2.7 Ohm) FET & 1xPS1045L SBR (45V, 10A)
Standby PWM Controller	On Bright OB5282CP

Test Results

Temperature & Compliance Info

□□□□ (°C / °F)	28-32 / 82.4-89.6
□□ ErP Lot3/6□□	✓
□□ (EU) No 617/2013□□	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓

Performance Summary

115V

Accredited		
□□□□ (>1450 load combinations)		90.022%
Average Noise Output (>1450 Load Combinations)		21.85dBA
PF□□□ (>1450 Load Combinations)		0.991
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load		72.412%
□□□□□		0.0180W
Non-Accredited		
12V Ripple (Full Load)		28.96mV
5V Ripple (Full Load)		12.72mV
3.3V Ripple (Full Load)		13.20mV
5VSB Ripple (Full Load)		10.17mV
12V Load Regulation		0.76%
5V Load Regulation		0.28%
3.3V Load Regulation		0.55%
5VSB Load Regulation		1.06%
Inrush Current		12.250A

230V

Accredited		
□□□□ (>1450 load combinations)		91.597%
Average Noise Output (>1450 Load Combinations)		21.71dBA
PF□□□ (>1450 Load Combinations)		0.946
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load		70.441%
□□□□□		0.0855W
Non-Accredited		
12V Ripple (Full Load)		27.66mV
5V Ripple (Full Load)		13.90mV
3.3V Ripple (Full Load)		15.22mV

5VSB Ripple (Full Load)	10.50mV	
12V Load Regulation	0.82%	
5V Load Regulation	0.22%	
3.3V Load Regulation	0.61%	
5VSB Load Regulation	1.04%	
Inrush Current	28.100A	
12V Transient Response (200%)	11.48V	
5V Transient Response (200%)	4.941V	
3.3V Transient Response (200%)	3.129V	
5VSB Transient Response (200%)	4.900V	
□□□□ & PG□□	22.70ms	
AC Loss to PWR_OK Hold Up Time	17.70ms	
PWR_OK Inactive to DC Loss Delay	5.00ms	
PSU Timings: T1 (20% / 100%)	62.0ms	64.0ms
PSU Timings: T3 (20% / 100%)	142.0ms	141.0ms
12V OCP (28.2°C / 42.3°C)	104.20A (125.09%), 12.122V	104.20A (125.09%), 12.132V
5V OCP (28.2°C / 42.3°C)	35.5A (142.00%), 5.037V	35.3A (141.20%), 5.042V
3.3V OCP (28.2°C / 42.3°C)	35.7A (142.80%), 3.27V	35.7A (142.80%), 3.267V
5VSB OCP (28.2°C / 42.3°C)	4.6A (153.33%), 4.85V	4.6A (153.33%), 4.832V
OPP (29.62°C / 41.92°C)	123.70%	123.71%

□□□□ & PG□□

Hold-Up Time (ms)	22.7
AC Loss to PWR_OK Hold Up Time (ms)	17.7
PWR_OK Inactive to DC Loss Delay (ms)	5



Tables

115V

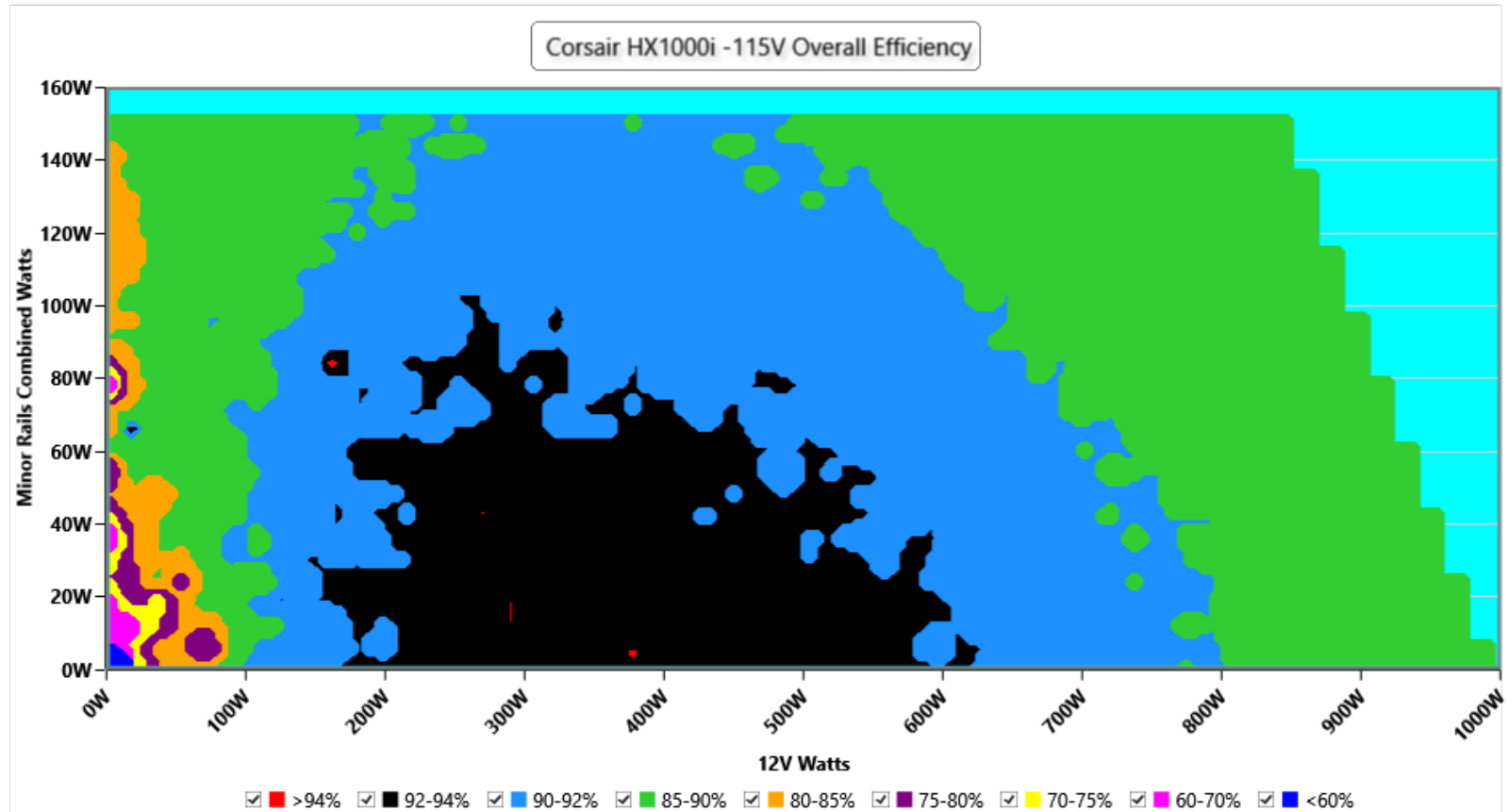
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.07 V	115.04 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.018 W	0.014 W	N/A	0.021 W	N/A	N/A
Apparent Power:	10.381 W	10.144 W	N/A	10.622 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

230V

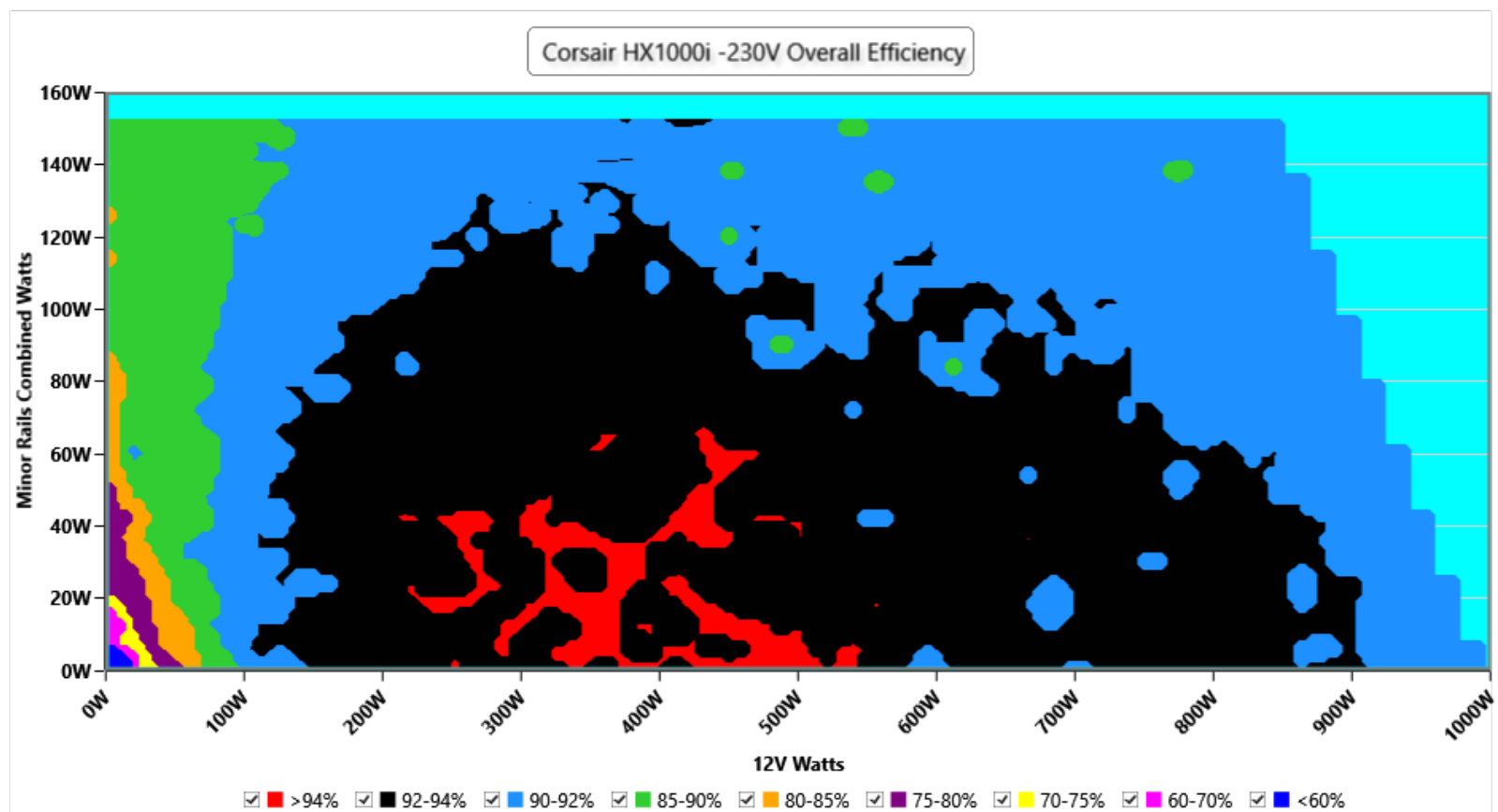
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.05 V	230.94 V	227.70 V	231.10 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.417	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.15 %	N/A	0.27 %	2.00 %	PASS
Real Power:	0.085 W	0.071 W	N/A	0.116 W	N/A	N/A
Apparent Power:	34.955 W	34.515 W	N/A	35.428 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A



115V



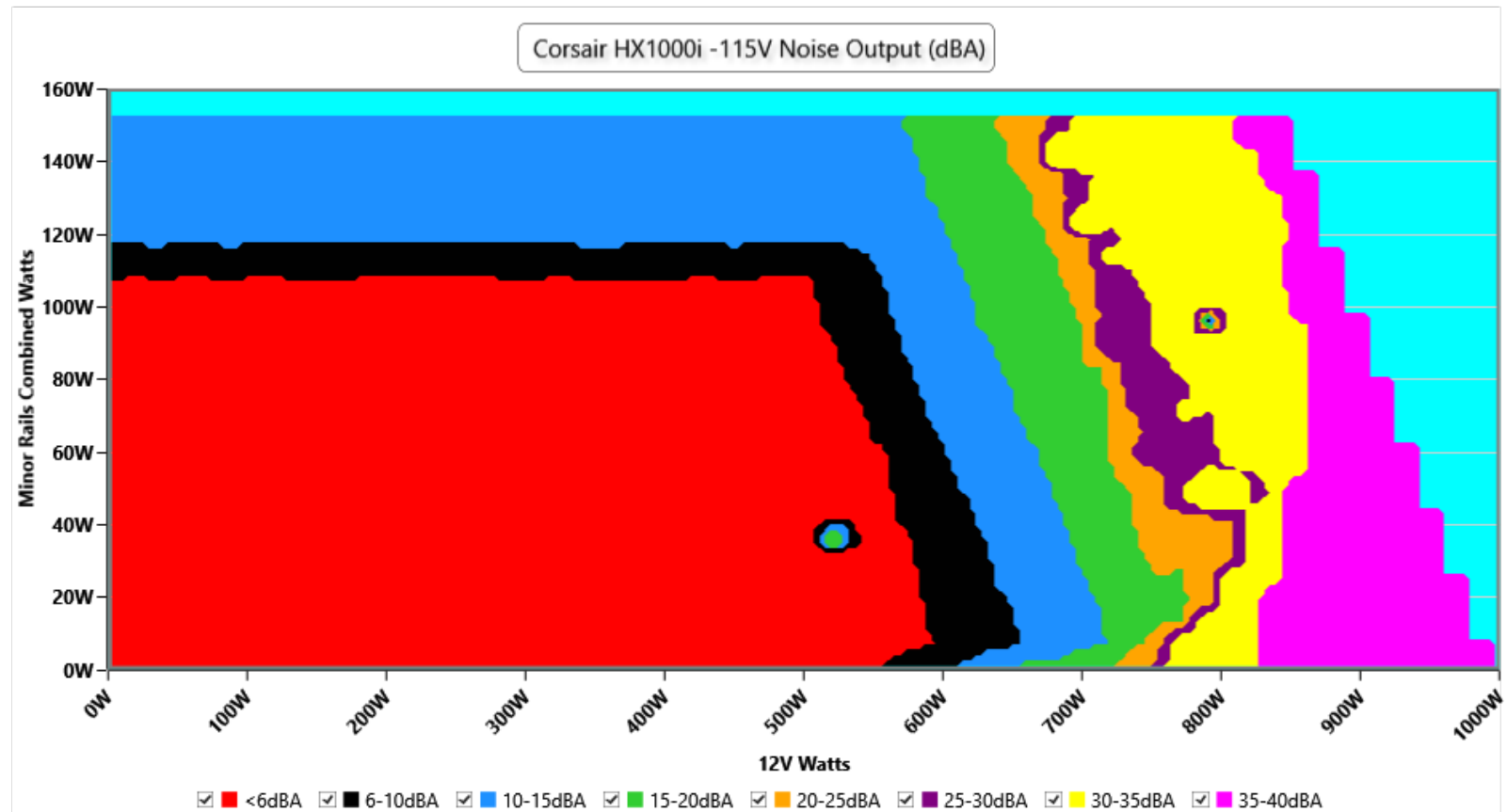
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



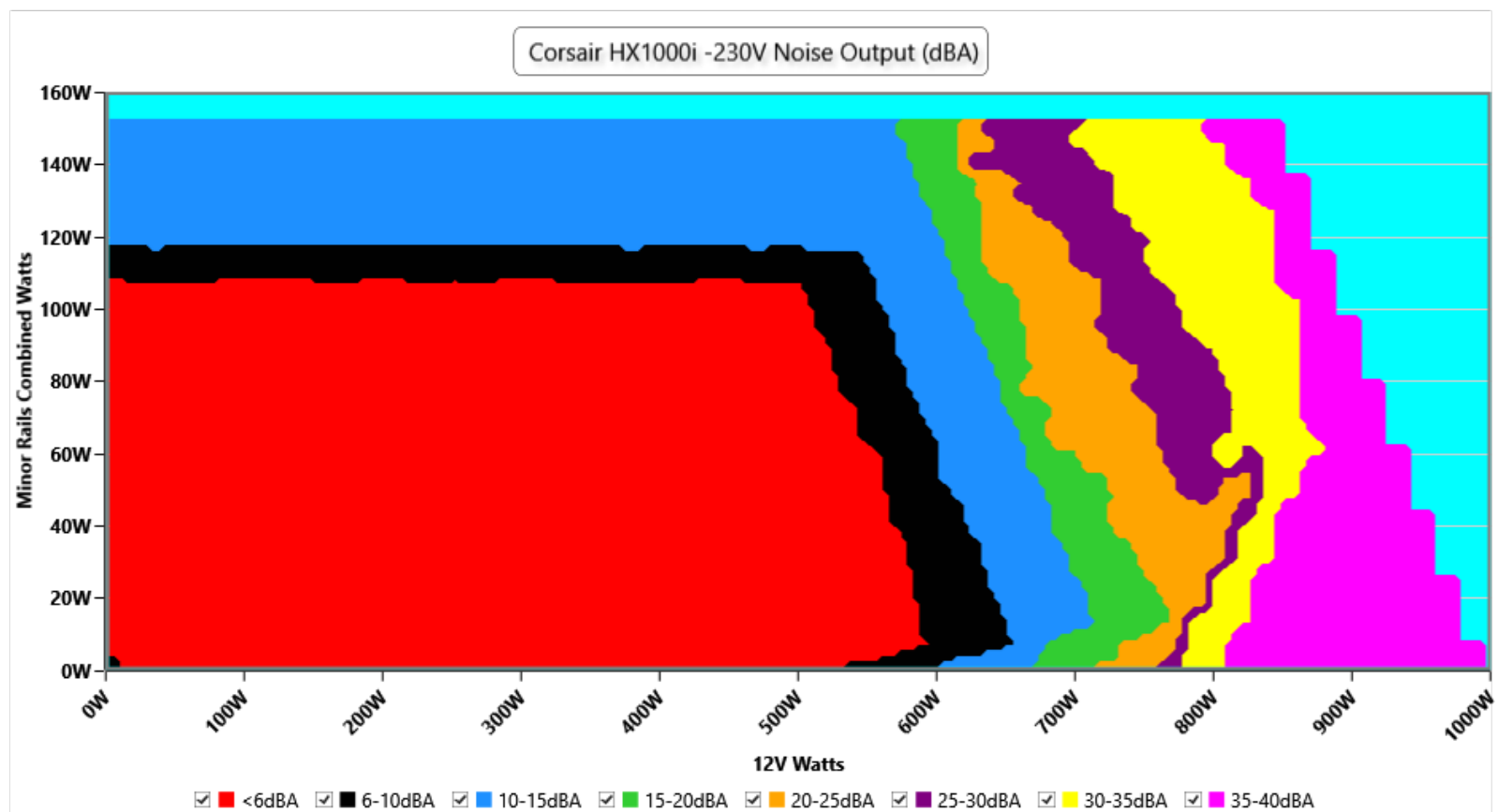
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



115V

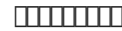


The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails



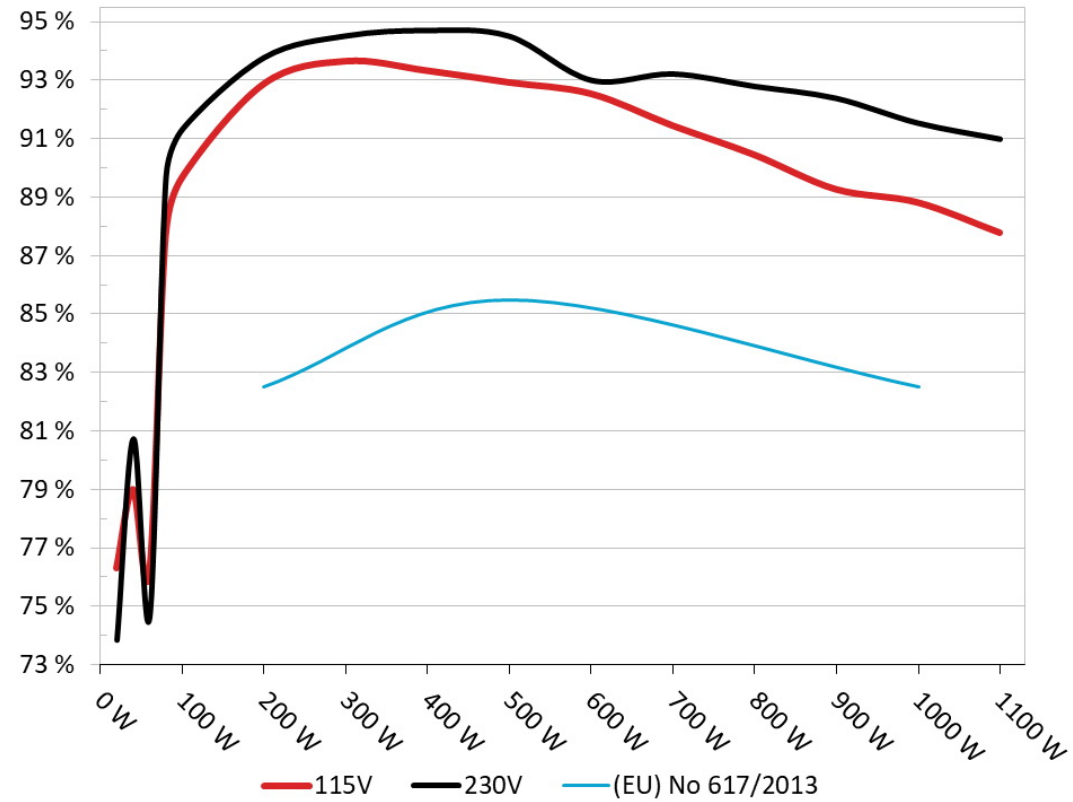
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance



Efficiency: Corsair HX1000i

Ambient: 36°C - 47°C (96.8°F - 116.6°F)

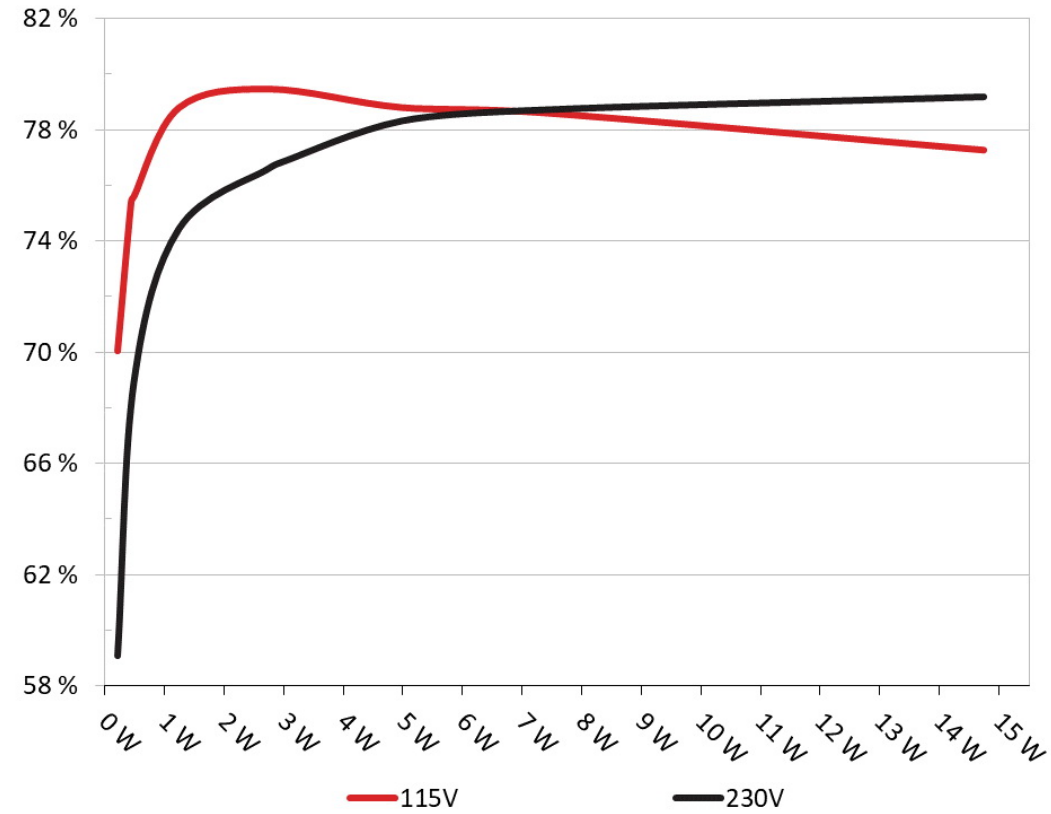


The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5Vsb

5VSB Efficiency: Corsair HX1000i

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



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

5Vsb (ErP Lot3/6 & CEC)

115V

#	5VSB	DC/AC (%)		PF/AC (%)
1	0.045A	0.226W	70.039%	0.031
	5.018V	0.323W		114.83V
2	0.09A	0.452W	75.386%	0.057
	5.017V	0.597W		114.83V
3	0.55A	2.751W	79.448%	0.273
	5.001V	3.463W		114.84V
4	1A	4.985W	78.784%	0.393
	4.985V	6.327W		114.85V
5	1.5A	7.452W	78.58%	0.465
	4.968V	9.483W		114.83V
6	3A	14.744W	77.255%	0.536
	4.915V	19.085W		114.83V

230V

#	5VSB	DC/AC (%)		PF/AC (%)
1	0.045A	0.226W	59.078%	0.011
	5.019V	0.383W		229.86V
2	0.6A	3W	76.868%	0.107
	5V	3.904W		229.87V
3	0.55A	2.751W	76.615%	0.099
	5.001V	3.591W		229.85V
4	1A	4.986W	78.334%	0.166
	4.986V	6.365W		229.84V
5	1.5A	7.452W	78.745%	0.23
	4.968V	9.463W		229.84V
6	3A	14.746W	79.203%	0.336
	4.915V	18.619W		229.82V

Protection Features

OCP (Cold @ 28.2°C)	12V: 104.20A (125.09%), 12.122V 5V: 35.5A (142.00%), 5.037V 3.3V: 35.7A (142.80%), 3.27V 5VSB: 4.6A (153.33%), 4.85V
OCP (Hot) @ 42.3°C)	12V: 104.20A (125.09%), 12.132V 5V: 35.3A (141.20%), 5.042V 3.3V: 35.7A (142.80%), 3.267V 5VSB: 4.6A (153.33%), 4.832V
OPP (Cold @ 29.6°C)	1237.02W (123.70%)
OPP (Hot @ 41.9°C)	1237.08W (123.71%)
OTP	✓ (133°C @ Secondary Side)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
NLO	✓
Fan Failure Protection	✓
SIP	Surge: MOV Inrush: NTC & Bypass Relay

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	6.428A	1.972A	2A	0.989A	99.978	89.156%	0	<6.0	47.03°C	0.96
	12.194V	5.069V	3.299V	5.058V	112.21				40.06°C	114.8V

20%	13.871A	2.959A	3.002A	1.187A	199.925	92.361%	0	<6.0	47.65°C	0.987
	12.186V	5.068V	3.297V	5.055V	216.557				40.52°C	114.78V
30%	21.672A	3.453A	3.504A	1.386A	299.962	93.139%	0	<6.0	47.99°C	0.994
	12.177V	5.067V	3.296V	5.05V	322.097				41.23°C	114.74V
40%	29.437A	3.947A	4.007A	1.586A	399.458	92.817%	0	<6.0	51.36°C	0.994
	12.170V	5.067V	3.294V	5.046V	430.25				41.8°C	114.7V
50%	36.891A	4.934A	5.013A	1.785A	499.199	92.416%	0	<6.0	53°C	0.995
	12.163V	5.067V	3.292V	5.043V	539.771				42.01°C	114.67V
60%	44.510A	5.924A	6.018A	1.985A	599.735	92.029%	440	<6.0	42.68°C	0.997
	12.131V	5.064V	3.29V	5.037V	652.013				58.32°C	114.66V
70%	51.932A	6.915A	7.026A	2.186A	699.471	90.944%	636	12.7	43.41°C	0.998
	12.138V	5.062V	3.288V	5.033V	769.092				59.25°C	114.63V
80%	59.503A	7.906A	8.032A	2.287A	799.496	89.945%	1267	36.3	43.8°C	0.998
	12.127V	5.059V	3.286V	5.029V	889.992				54.32°C	114.58V
90%	67.408A	8.402A	8.524A	2.388A	899.321	88.767%	1562	41.1	44.49°C	0.999
	12.118V	5.058V	3.285V	5.025V	1013.35				57.78°C	114.53V
100%	75.122A	8.899A	9.046A	2.992A	999.292	88.316%	1589	42.4	45.62°C	0.999
	12.109V	5.056V	3.283V	5.013V	1132.6				58.05°C	114.5V
110%	82.780A	9.892A	10.149A	2.993A	1099.914	87.281%	1867	46.2	46°C	0.998
	12.100V	5.054V	3.281V	5.012V	1259.7				59.02°C	114.47V
CL1	0.114A	17.852A	18.184A	0A	151.275	84.311%	616	11.6	41.58°C	0.981
	12.185V	5.057V	3.277V	5.114V	179.351				58.29°C	114.79V
CL2	0.113A	24.68A	0A	0A	126.231	84.065%	766	19.5	42.09°C	0.975
	12.190V	5.059V	3.284V	5.126V	151.763				52.06°C	114.8V
CL3	0.113A	0A	25.161A	0A	83.881	76.831%	941	26.3	41.19°C	0.956
	12.189V	5.067V	3.279V	5.078V	109.172				48.55°C	114.81V
CL4	82.547A	0A	0A	0A	999.85	88.908%	1383	38.3	44.69°C	0.999
	12.112V	5.063V	3.291V	5.04V	1124.555				65.23°C	114.51V

The results above are not used in the certification process

230V

項目	12V	5V	3.3V	5VSB	DC/AC (V)	項目	回転数 (RPM)	騒音レベル (dB[A])	温度 (コア / ヒートシンク)	PF/AC 電圧
10%	6.426A	1.973A	1.999A	0.989A	99.978	90.808%	0	<6.0	46.76°C	0.791
	12.198V	5.066V	3.301V	5.055V	110.074				40.06°C	229.85V
20%	13.867A	2.961A	3.001A	1.188A	199.925	93.261%	0	<6.0	46.61°C	0.914
	12.188V	5.065V	3.299V	5.051V	214.335				40.74°C	229.82V
30%	21.668A	3.456A	3.503A	1.387A	299.964	94.001%	0	<6.0	48.14°C	0.943
	12.180V	5.064V	3.297V	5.046V	319.113				41.14°C	229.8V
40%	29.434A	3.95A	4.006A	1.587A	399.45	94.188%	0	<6.0	49.16°C	0.94
	12.171V	5.063V	3.295V	5.041V	424.75				41.62°C	229.78V
50%	36.889A	4.939A	5.011A	1.787A	499.196	93.994%	0	<6.0	50.34°C	0.944
	12.164V	5.062V	3.293V	5.038V	531.35				42.43°C	229.8V
60%	44.532A	5.928A	6.018A	1.987A	599.743	92.486%	433	<6.0	42.74°C	0.974
	12.125V	5.061V	3.29V	5.035V	647.943				52.52°C	229.71V
70%	51.947A	6.917A	7.025A	2.186A	699.469	92.7%	631	12.2	43.03°C	0.985
	12.134V	5.06V	3.288V	5.031V	754.663				56.56°C	229.73V
80%	59.509A	7.905A	8.033A	2.287A	799.498	92.276%	1205	34.2	43.79°C	0.987
	12.126V	5.059V	3.286V	5.029V	866.357				56.95°C	229.71V
90%	67.415A	8.403A	8.524A	2.388A	899.305	91.868%	1348	37.4	44.63°C	0.989
	12.117V	5.057V	3.284V	5.025V	978.909				57.41°C	229.69V
100%	75.132A	8.9A	9.047A	2.993A	999.314	91.02%	1562	41.1	45.75°C	0.99
	12.107V	5.056V	3.283V	5.012V	1097.959				59.01°C	229.67V
110%	82.793A	9.893A	10.151A	2.993A	1099.931	90.473%	1797	44.5	46.64°C	0.991
	12.098V	5.054V	3.28V	5.011V	1215.77				59.59°C	229.66V
CL1	0.114A	17.852A	18.19A	0A	151.277	85.321%	616	11.6	42.46°C	0.896
	12.185V	5.057V	3.276V	5.114V	177.27				55.56°C	229.81V
CL2	0.113A	24.682A	0A	0A	126.233	84.002%	767	19.5	42.97°C	0.837
	12.190V	5.059V	3.284V	5.127V	150.893				50.81°C	229.83V
CL3	0.113A	0A	25.165A	0A	83.881	77.876%	942	26.3	41.92°C	0.787
	12.189V	5.067V	3.278V	5.077V	107.712				48.02°C	229.83V

CL4	82.567A	0A	0A	0A	999.95	91.298%	1453	40	44.99°C	0.99
	12.111V	5.062V	3.291V	5.039V	1095.48				57.16°C	229.7V

The results above are not used in the certification process

20-80

115V

	12V	5V	3.3V	5VSB	DC/AC ()		(RPM)	(dB[A])	(/)	PF/AC
20W	1.216A	0.493A	0.5A	0.197A	19.992	75.827%	0	<6.0	42.13°C	0.625
	12.201V	5.067V	3.3V	5.066V	26.602				36.38°C	114.83V
40W	2.680A	0.691A	0.7A	0.296A	39.994	78.51%	0	<6.0	44.53°C	0.894
	12.199V	5.068V	3.3V	5.065V	51.063				37.03°C	114.83V
60W	4.142A	0.887A	0.899A	0.395A	59.994	75.642%	0	<6.0	44.3°C	0.939
	12.199V	5.07V	3.301V	5.065V	80.02				38.12°C	114.8V
80W	5.600A	1.085A	1.099A	0.494A	79.927	87.166%	0	<6.0	45.17°C	0.904
	12.195V	5.07V	3.301V	5.064V	91.075				39.14°C	114.81V

The results above are not used in the certification process

230V

	12V	5V	3.3V	5VSB	DC/AC ()		(RPM)	(dB[A])	(/)	PF/AC
20W	1.216A	0.493A	0.5A	0.198A	19.991	73.338%	0	<6.0	41.12°C	0.456
	12.204V	5.065V	3.301V	5.064V	27.318				37.44°C	229.85V
40W	2.678A	0.691A	0.7A	0.296A	39.994	80.214%	0	<6.0	41.49°C	0.616
	12.206V	5.066V	3.301V	5.064V	49.639				37.26°C	229.84V
60W	4.140A	0.888A	0.899A	0.395A	59.994	82.913%	0	<6.0	44.68°C	0.687
	12.204V	5.067V	3.303V	5.063V	72.258				38.91°C	229.83V
80W	5.598A	1.085A	1.099A	0.494A	79.927	89.186%	0	<6.0	44.78°C	0.749
	12.200V	5.067V	3.302V	5.062V	89.602				39.14°C	229.83V

The results above are not used in the certification process



115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.6 mV	8.5 mV	9.2 mV	5.1 mV	Pass
20% Load	16.1 mV	9.9 mV	10.3 mV	6.0 mV	Pass
30% Load	17.0 mV	11.6 mV	10.9 mV	6.3 mV	Pass
40% Load	19.4 mV	8.5 mV	8.3 mV	5.3 mV	Pass
50% Load	18.8 mV	8.6 mV	8.6 mV	5.3 mV	Pass
60% Load	17.1 mV	9.5 mV	9.9 mV	6.0 mV	Pass
70% Load	16.8 mV	8.9 mV	10.2 mV	6.0 mV	Pass
80% Load	16.9 mV	8.7 mV	10.1 mV	6.9 mV	Pass
90% Load	19.1 mV	9.8 mV	11.0 mV	7.2 mV	Pass
100% Load	29.0 mV	12.7 mV	13.2 mV	10.2 mV	Pass
110% Load	30.2 mV	11.9 mV	13.9 mV	9.5 mV	Pass
Crossload 1	25.0 mV	15.6 mV	14.1 mV	7.2 mV	Pass
Crossload 2	16.6 mV	18.2 mV	9.6 mV	6.5 mV	Pass
Crossload 3	20.0 mV	11.2 mV	13.2 mV	7.4 mV	Pass
Crossload 4	29.9 mV	13.0 mV	13.3 mV	7.7 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.6 mV	8.7 mV	8.5 mV	5.6 mV	Pass
20% Load	12.3 mV	8.3 mV	8.2 mV	4.9 mV	Pass
30% Load	15.5 mV	10.1 mV	9.6 mV	6.0 mV	Pass
40% Load	19.4 mV	9.3 mV	9.1 mV	5.7 mV	Pass
50% Load	22.9 mV	10.1 mV	10.1 mV	6.1 mV	Pass
60% Load	19.7 mV	11.2 mV	10.9 mV	6.8 mV	Pass

