

Testing Report - Performance - Efficiency

Date 23/04/2019

Efficiency Load 50%

93.15

Everange Efficiency Load 10% - 100%

91.89

General Evaluation

85.07/100

Manufacturer	Seasonic
Model	SSR-650SGX
Serial	-
Type	ATX 12V 2.92 / V2.31
PFC	Active

Specification		Value		
Input Voltage (Volt AC)		100-240		
Input Current (Ampere)		8A - 4A		
Input Frequency (Hz)		50/60		
Output Power (Watt)		650		
	Ampere	Watt	Watt Tot	
Output +12V	54A	648W	650W	
Output +5V	20A	100W		
Output +3.3V	20A			
Output +5Vsb	3A	15W		
Output -12V	0.3A	3.6W		

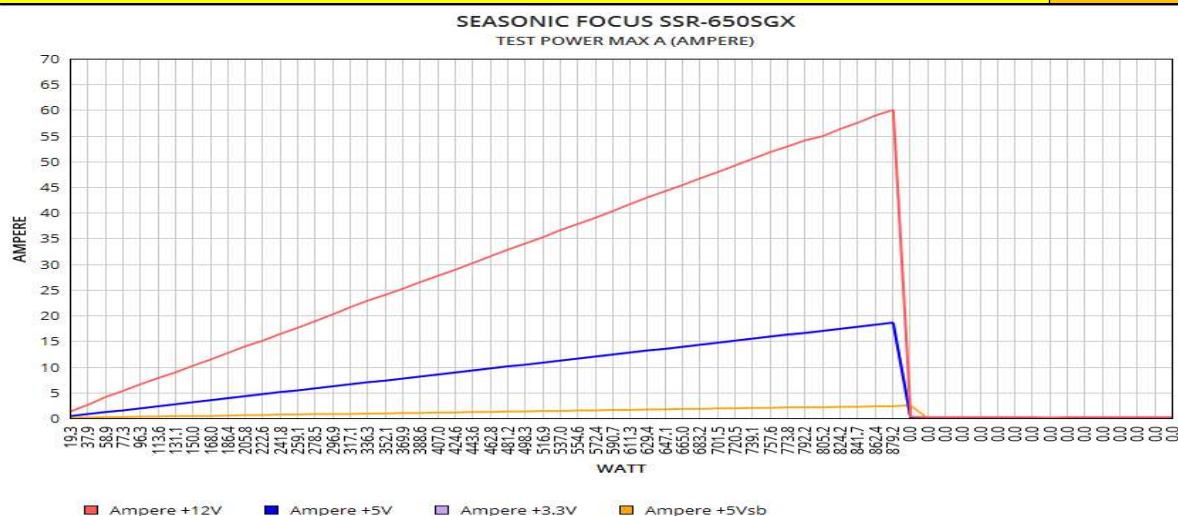


Measurement conditions (pure sine wave):

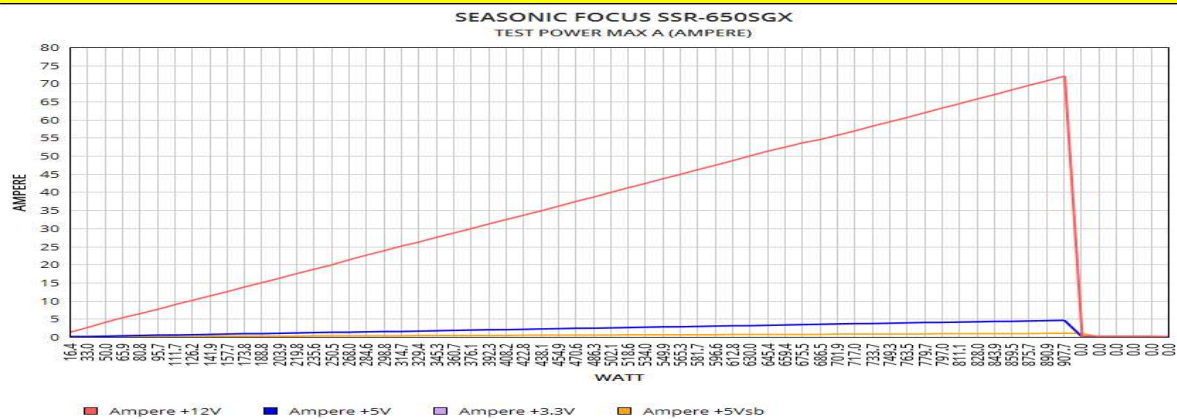
220V / 50Hz

Power Max Ampere A - Value [+12V-81A]-[+5V-25A]-[+3.3V-25A]-[+5Vsb-3A]

Rating: 8.10

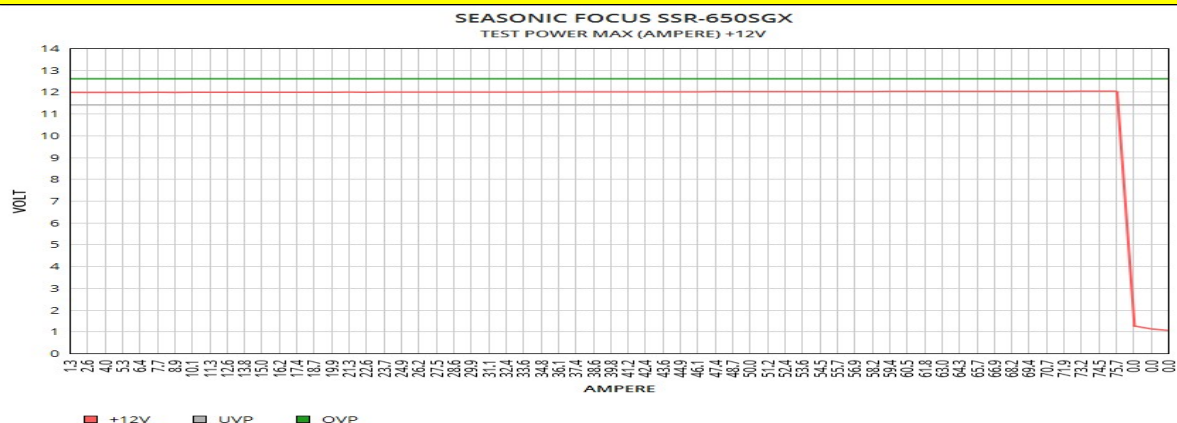


Power Max Ampere B - Value [+12V-81A]-[+5V-5A]-[+3.3V-5A]-[+5Vsb-1A]



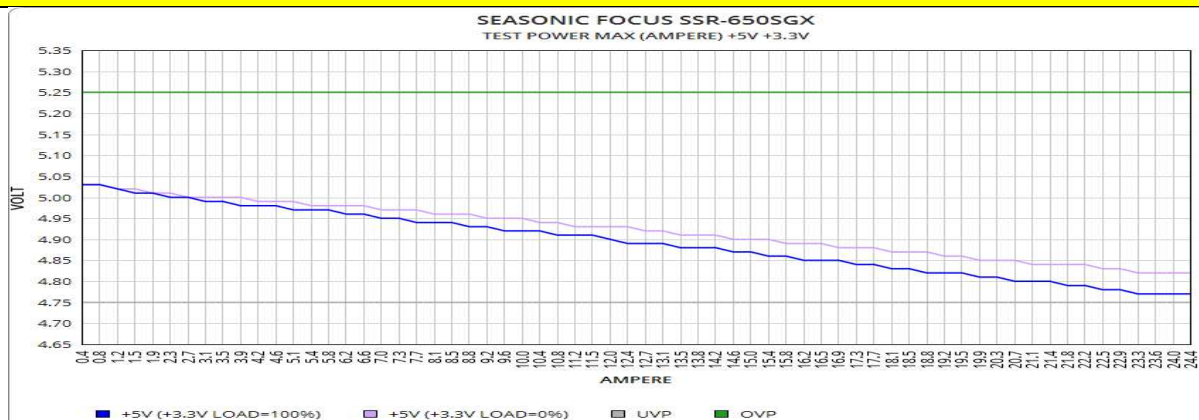
www.digitalelek.it

Power Max Ampere 12V - Value [+12V-81A]-[+5V-0A]-[+3.3V-0A]-[+5Vsb-0A]



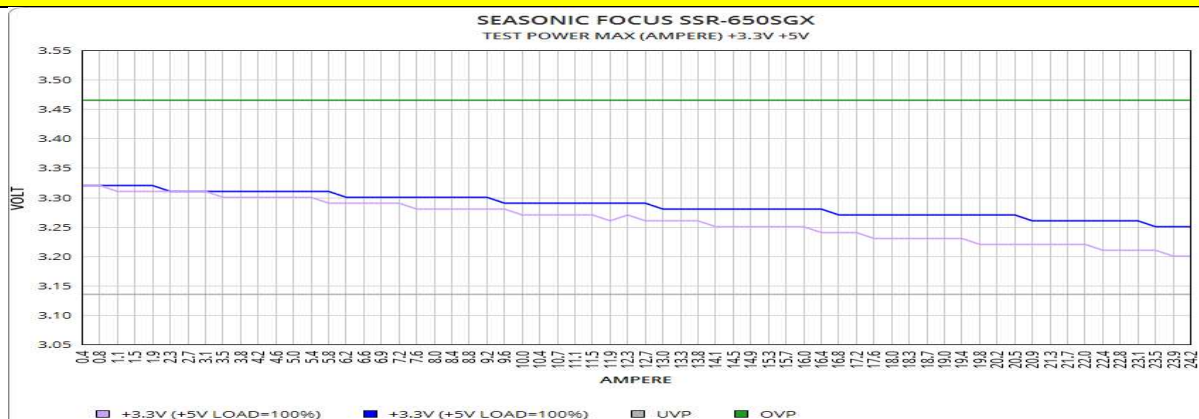
www.digitalelek.it

Power Max Ampere 5V - Value [+12V-0A]-[+5V-25A]-[+3.3V-0A]-[+5Vsb-0A]



www.digitalelek.it

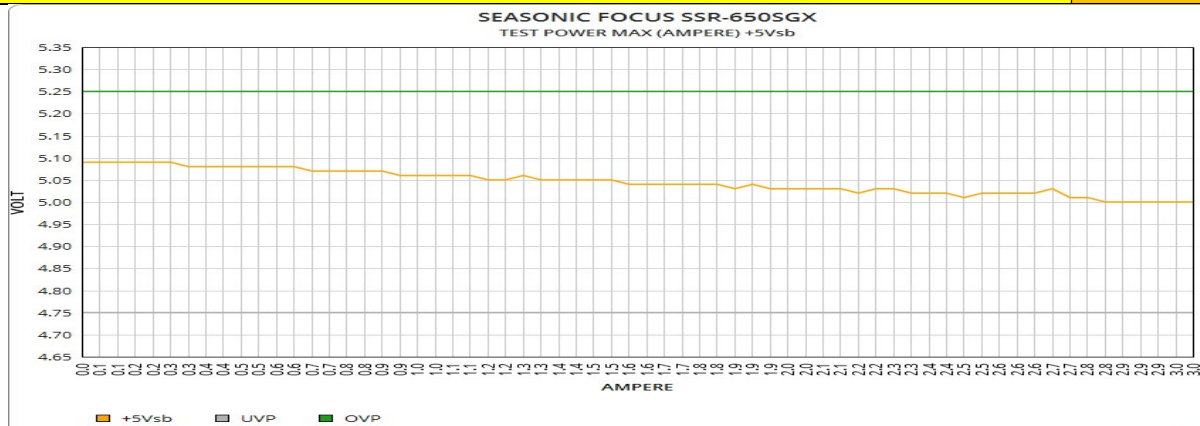
Power Max Ampere 3.3V - Value [+12V-0A]-[+5V-0A]-[+3.3V-25A]-[+5Vsb-0A]



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Power Max Ampere 5Vsb - Value [+12V-0A]-[+5V-0A]-[+3.3V-0A]-[+5Vsb-3.0A]

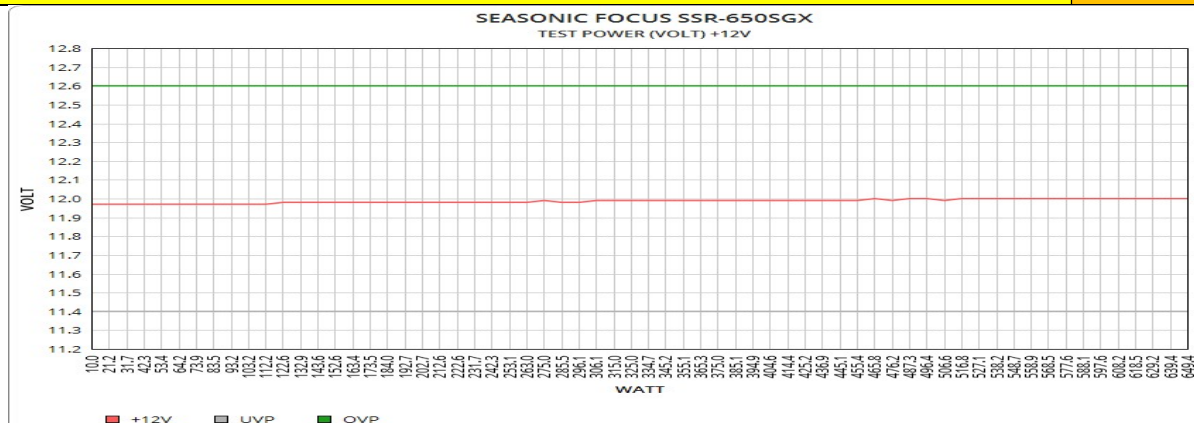
Rating: 8.63



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Power (Voltage 12V) - Value [+12V-50A]-[+5V-6A]-[+3.3V-6A]-[+5Vsb-1A]

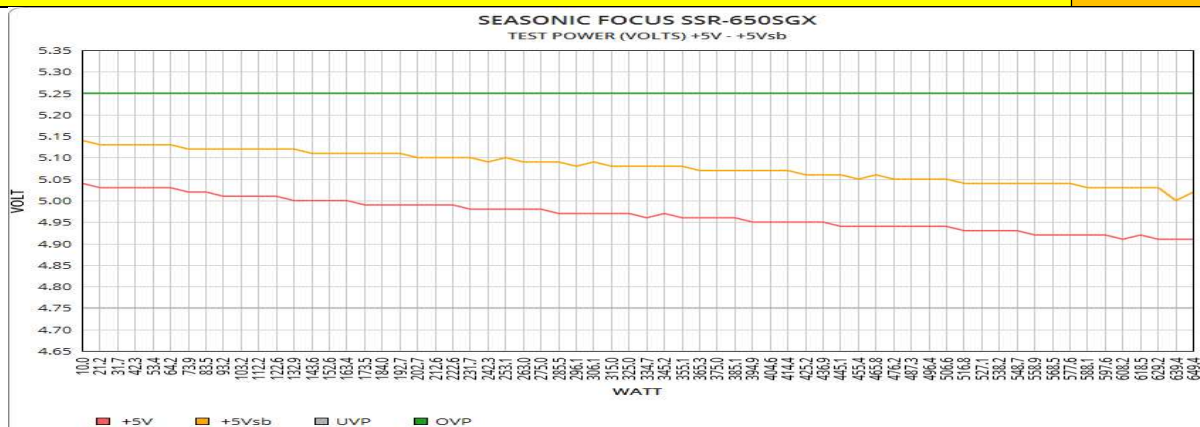
Rating: 9.89



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Power (Voltage 5V + 5Vsb) - Value [+12V-50A]-[+5V-6A]-[+3.3V-6A]-[+5Vsb-1A]

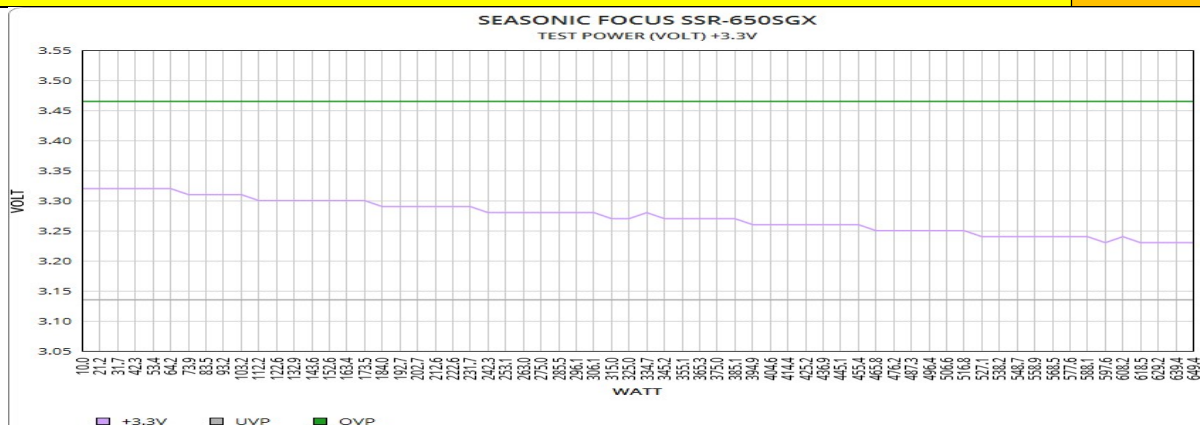
Rating: 9.29



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Power (Voltage 3.3V) - Value [+12V-50A]-[+5V-6A]-[+3.3V-6A]-[+5Vsb-1A]

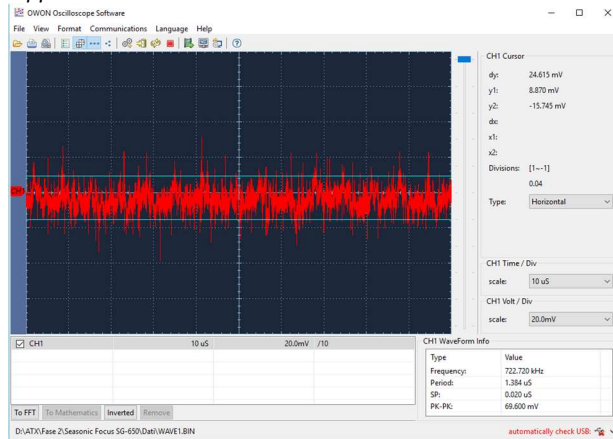
Rating: 9.29



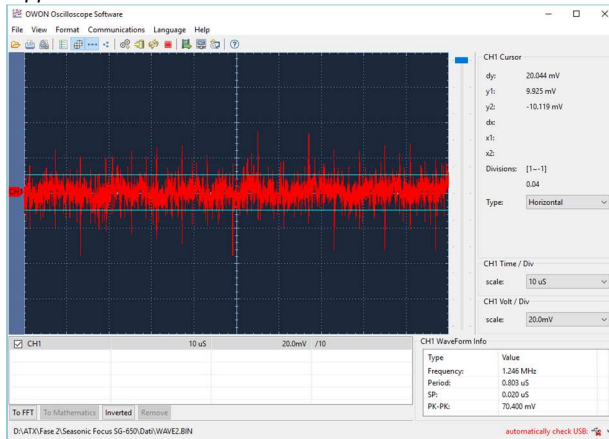
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Ripple (Voltage Pk-Pk) - Value [+12V-25A]-[+5V-3A] - [+3.3V-3A]-[+5Vsb-0.1A]

Ripple +12V – 24.615 mV

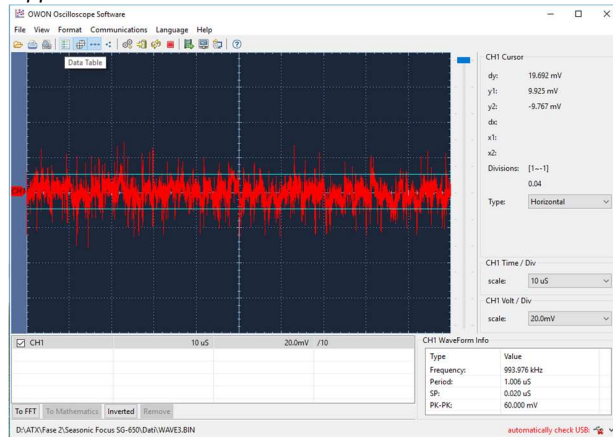


Ripple +5V – 20.044 mV

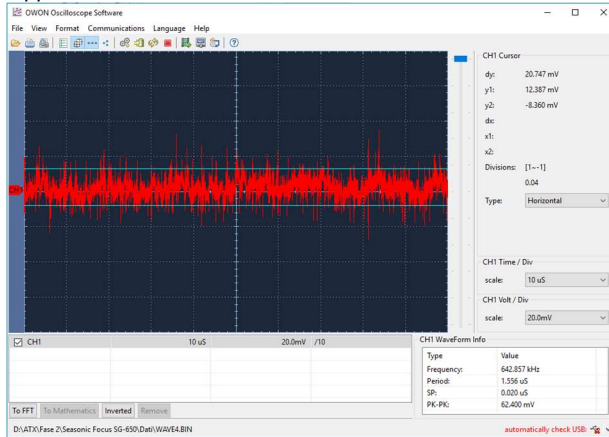


Ripple (Voltage Pk-Pk) - Value [+12V-25A]-[+5V-3A] - [+3.3V-3A]-[+5Vsb-0.1A]

Ripple +3.3V – 19.692 mV

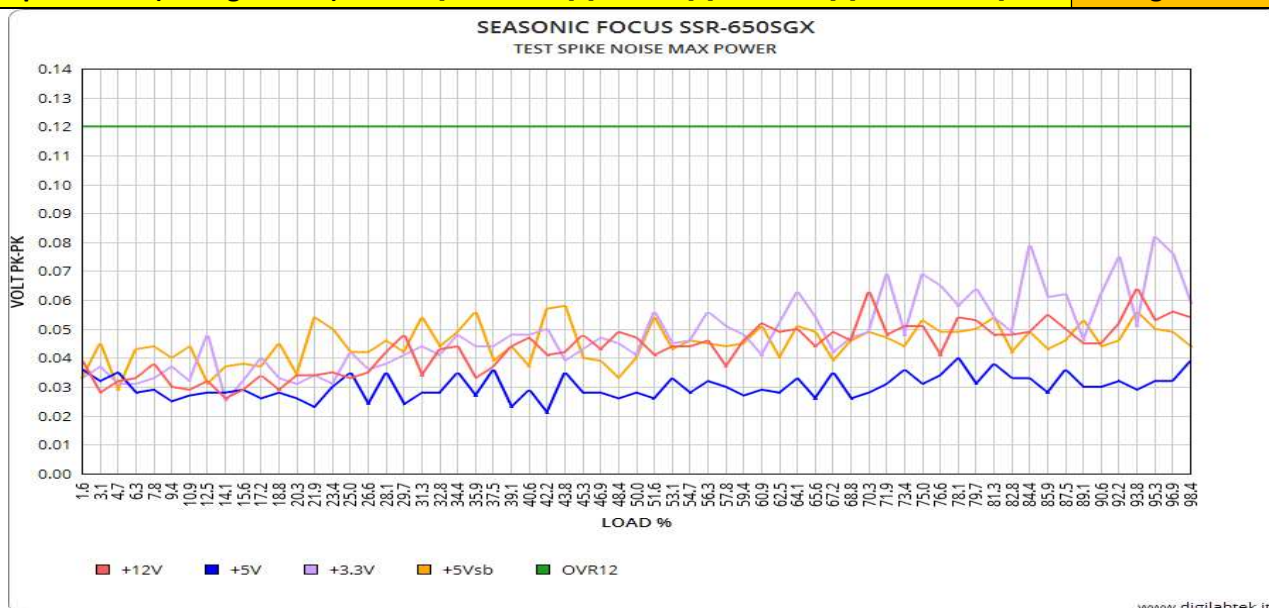


Ripple +5Vsb – 20.747 mV



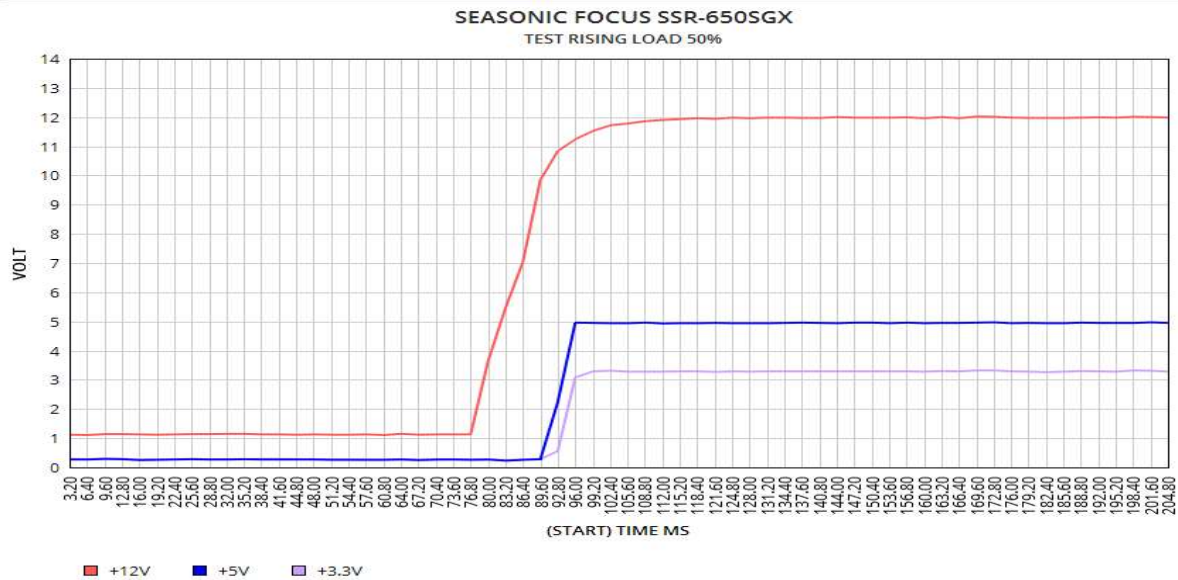
Spike noise (Voltage Pk-Pk) - Value [+12V-50A]-[+5V-6A]-[+3.3V-6A]-[+5Vsb-0.1A]

Rating: 8.71



Rising (Voltage) - Value [+12V-25A]-[+5V-3A]-[+3.3V-3A]-[+5Vsb-0.5A]

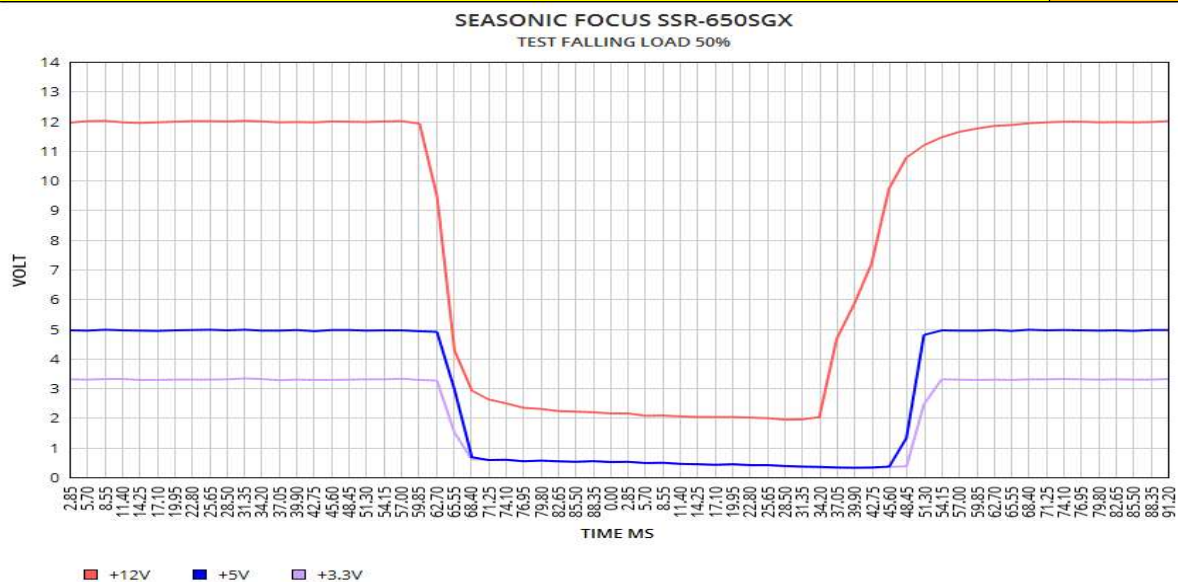
Rating: 3.88



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Falling (Voltage) - Value [+12V-25A]-[+5V-3A]-[+3.3V-3A]-[+5Vsb-0.5A]

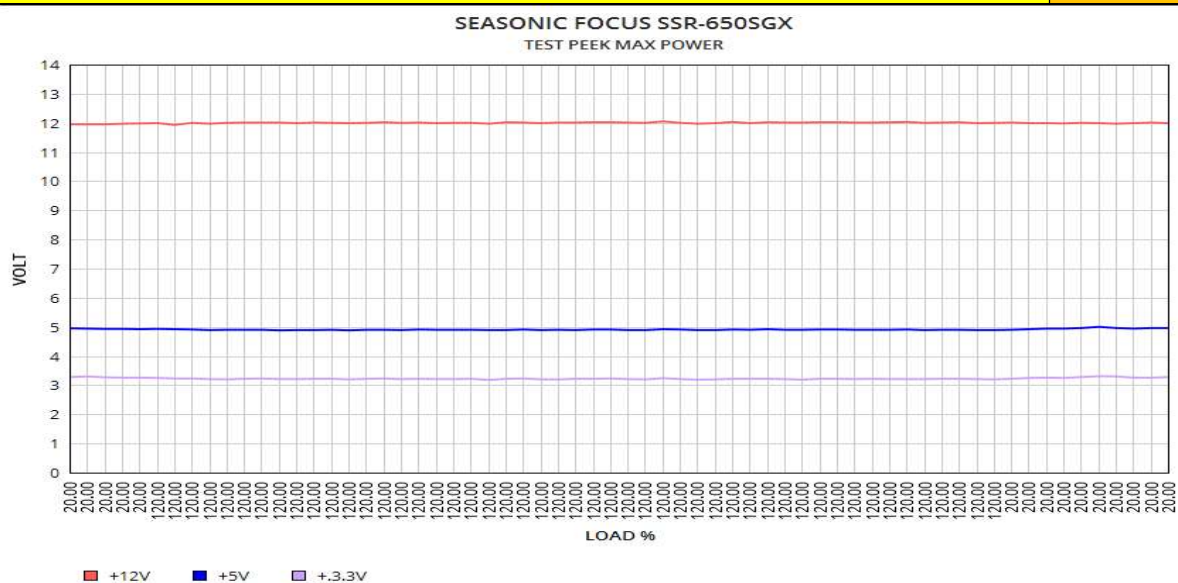
Rating: 9.88



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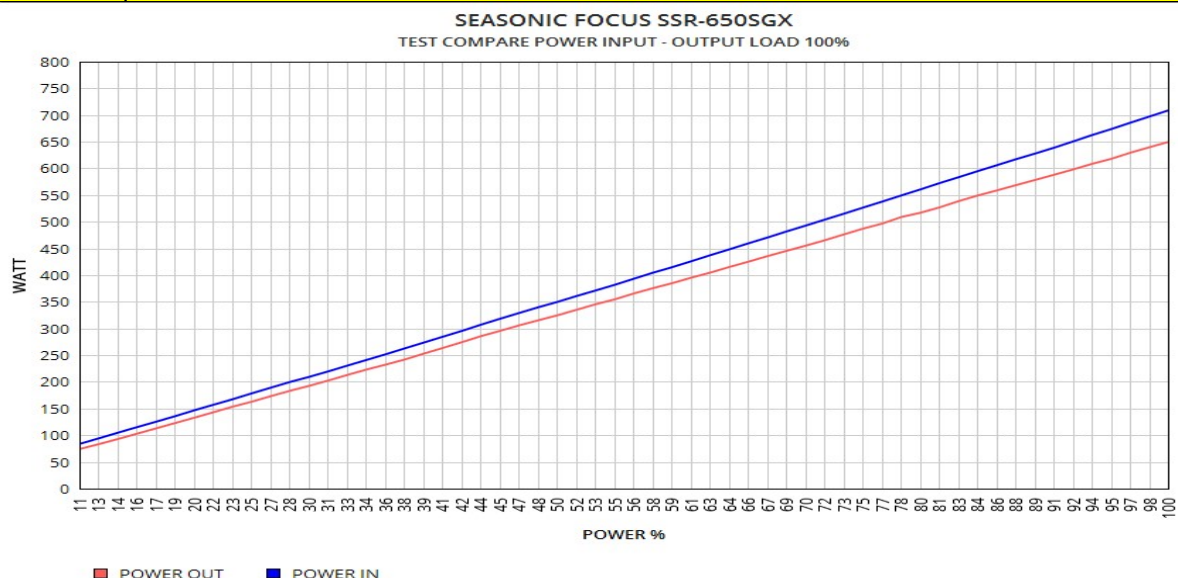
Peek (Voltage) - Value [+12V-50A]-[+5V-6A]-[+3.3V-6A]-[+5Vsb-1A]

Rating: 9.15



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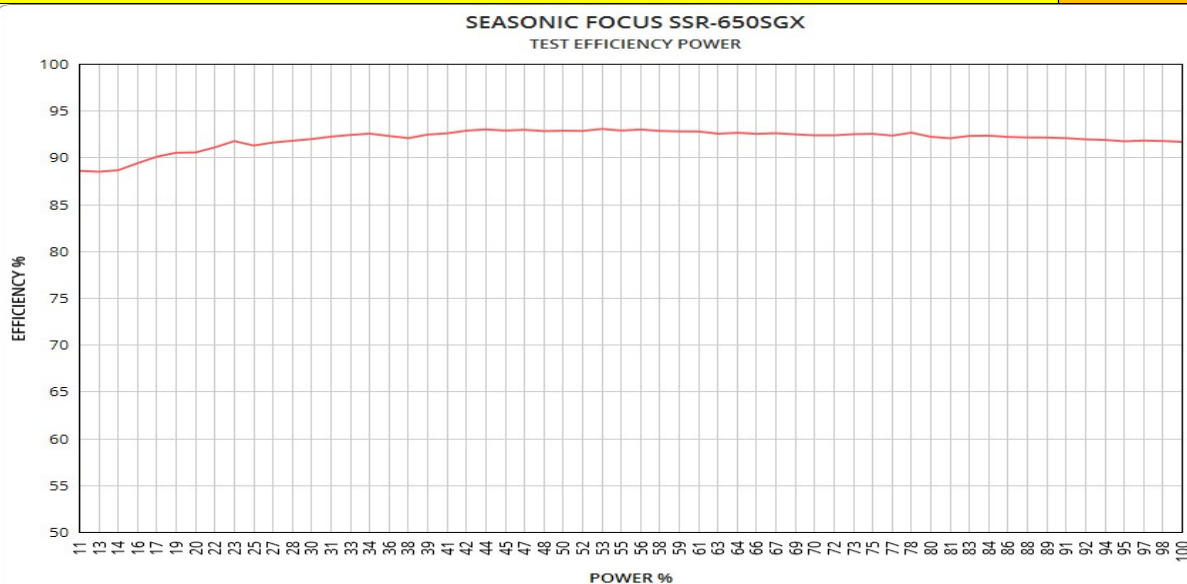
Compare Input and Output Power



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Efficiency Power Supply

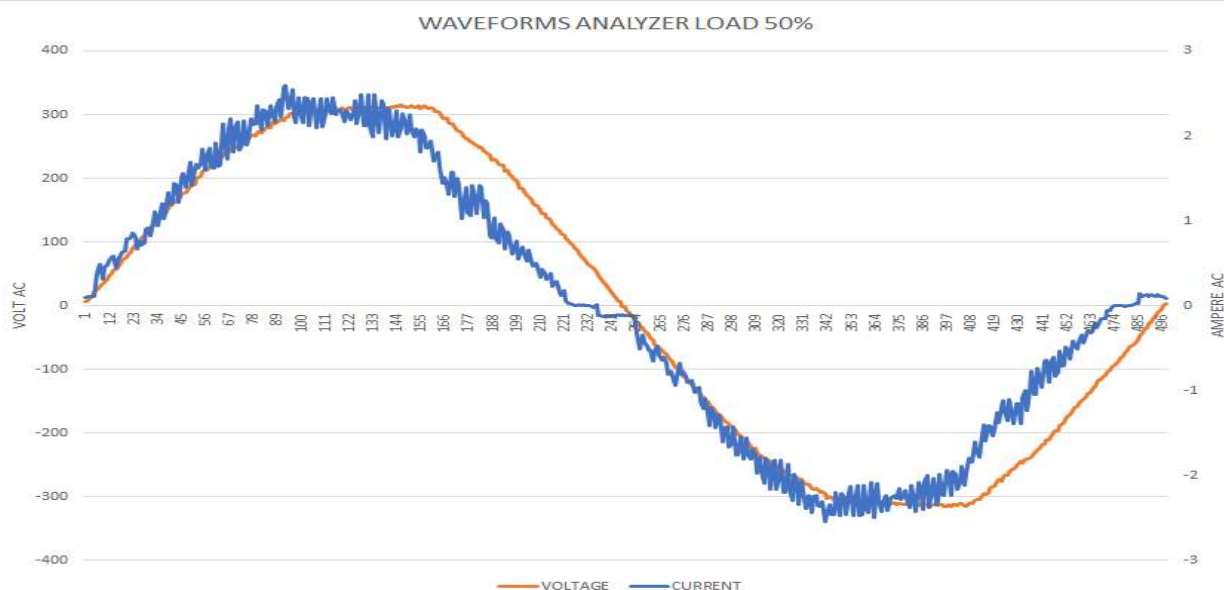
Rating: 10



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Current and Voltage Waveforms Value [+12V-25A]-[+5V-3A]-[+3.3V-3A]-[+5Vsb-0.5A]

Rating:



Efficiency Report 220V AC / 50Hz

Watt In	I-rms	PF	Load %	+12V/A	+5V/A	+3.3V/A	+5Vsb/A	Watt Out	Efficiency
-	-	-	10%	-/-	-/-	-/-	-/-	-	-
142.36	0.682	0.91	20%	11.97/10.0	5.0/0.98	3.3/0.97	5.1/0.22	129.90	91.24%
349.35	1.575	0.97	50%	11.98/24.9	4.9/2.95	3.3/3.00	5.1/0.54	325.40	93.15%
707.70	3.141	0.98	100%	12.00/49.7	4.9/5.99	3.2/5.94	5.0/1.08	650.74	91.95%

Watt In	I-rms	PF	Load %	Standby Efficiency +5Vsb/A				Watt Out	Efficiency
3.74	0.117	-	20%	5.14/0.55				2.81	74.86%
10.81	0.161	0.26	50%	5.08/1.61				8.22	76.04%
20.75	0.217	0.40	100%	5.08/3.11				15.70	75.66%

Standby Power IEC62301-2011 (MAX 0.5W)

PASS

0.140W

Conclusions

Positive notes:

-
-
-

Negative notes:

-
-
-