80 PLUS Verification and Testing Report

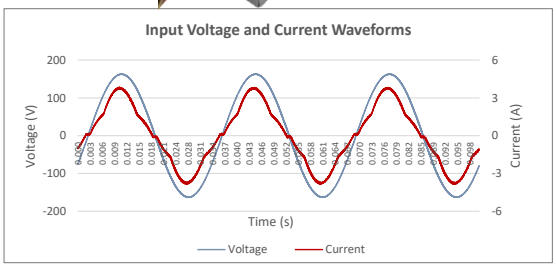


TYPICAL EFFICIENCY (50% Load):	87.14%
AVERAGE EFFICIENCY :	80.08%
AVERAGE STANDBY EFFICIENCY :	75.45%
80 PLUS COMPLIANT:	Bronze

ID Number	8224
Manufacturer	In Win
Model Number	IP-S450EF7-2
Sample 1 S/N:	P62257001100009
Sample 2 S/N:	P62257001100002
Type	TFX
Test Date	7/20/26

Rated	Value	Units
Input Voltage	110-240	Volts
Input Current	8	Amps
Input Frequency	50-60	Hz
Rated Output Power	450	Watts

Note: All measurements were taken with input voltage at 115 V nominal at 60 Hz.



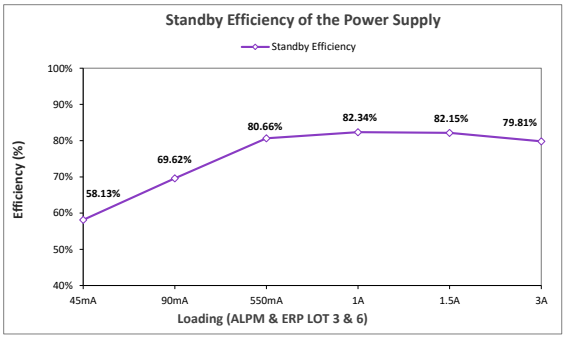
Input AC Current Waveform (ITHD = 15.9%, 50% Load)

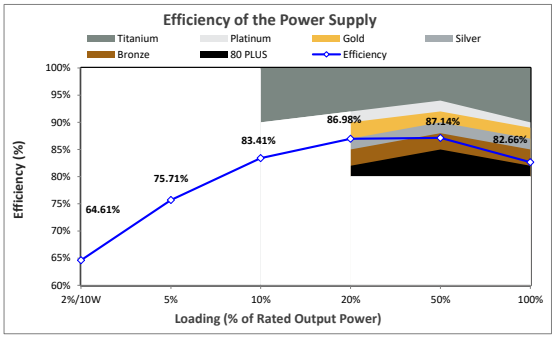
I_{RMS} (A)	PF	I_{THD} (%)	Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)					Output Watts	Efficiency
					12V (cumulative of 12V1, 12V2, etc.)	-12V	3.3V	5V	5VSB		
0.071	0.0169	15.56	0%	0.14	No-Load						
0.179	**0.7722**	21.27	2%/10W	15.93	12.271/0.551	0.000/0.000	3.371/0.150	5.058/0.500	5.107/0.100	10.29	**64.61%**
0.294	**0.8953**	18.66	5%	30.26	12.224/1.434	11.735/0.013	3.370/0.539	5.074/0.539	5.105/0.134	22.91	**75.71%**
0.497	**0.9605**	15.38	10%	54.90	12.229/2.865	11.733/0.027	3.367/1.078	5.066/1.078	5.098/0.269	45.79	**83.41%**
0.933	**0.9804**	10.12	20%	105.27	12.231/5.730	11.729/0.054	3.361/2.156	5.050/2.157	5.085/0.537	91.56	**86.98%**
2.311	**0.9852**	15.90	50%	262.15	12.225/14.325	11.746/0.134	3.341/5.393	5.004/5.393	5.043/1.343	228.43	**87.14%**
4.894	**0.9779**	19.92	100%	550.47	12.212/28.649	11.845/0.269	3.306/10.786	4.925/10.786	4.971/2.686	455.03	**82.66%**

Note: Efficiency data was obtained from Sample 1 (Serial Number: P62257001100009)

I_{RMS} (A)	PF	I_{THD} (%)	Load	Input Watts	DC Terminal Voltage (V)/ DC Load Current (A)	Output Watts	Standby Efficiency
					5VSB		
0.068	0.0164	7.51	0mA	0.13	Vampire Load		
0.068	**0.0504**	16.40	45mA	0.40	5.122/0.045	0.23	**58.13%**
0.071	**0.0812**	25.28	90mA	0.66	5.121/0.090	0.46	**69.62%**
0.100	**0.3005**	69.17	550mA	3.48	5.105/0.550	2.81	**80.66%**
0.140	**0.3818**	80.09	1A	6.18	5.089/1.000	5.09	**82.34%**
0.189	**0.4271**	83.88	1.5A	9.26	5.070/1.500	7.61	**82.15%**
0.339	**0.4814**	85.69	3A	18.86	5.014/3.002	15.05	**79.81%**

Note: Standby efficiency data was obtained from Sample 2 (Serial Number: P62257001100002)





These tests were conducted by a third party independent testing firm on behalf of the 80 PLUS Program. 80 PLUS is a certification program to promote highly-efficient power supplies (greater than 80% efficiency in the active mode) in technology applications. *https://www.clearesult.com/80plus/ [clearesult.com]*