

Summary of Limits

DOE (10th Feb 2016)

No load power limits	
Rated power	No load consumption
0 W to ≤1 W	≤0.1 W
>1 W to ≤49 W	≤0.1 W
>49 W to ≤250 W	≤0.21 W
>250 W	≤0.5 W

Active mode efficiency, O/P < 6 V	
Rated power	Average efficiency
0 W to ≤1 W	≥0.517 x Pout + 0.087
>1 W to ≤49 W	≥0.0834 x Ln (Pout) - 0.0014 x Pout + 0.609
>49 W to ≤250 W	≥0.87
>250 W	≥0.875

Active mode efficiency, O/P ≥ 6 V	
Rated power	Average efficiency
0 W to ≤1 W	≥0.5 x Pout + 0.16
>1 W to ≤49 W	≥[0.071 x Ln (Pout) - 0.0014 x Pout] + 0.67
>49 W to ≤250 W	≥0.88
>250 W	≥0.875

EU Code of Conduct (Jan 1st 2014 and Jan 1st 2016)

No load power limits		
Rated power	No load consumption	
	Tier 1 (1st Jan 2014)	Tier 2 (1st Jan 2016)
0 W to ≤1 W	≤0.15 W	≤0.075 W
>1 W to ≤49 W	≤0.15 W	≤0.075 W
>49 W to ≤250 W	≤0.25 W	≤0.15 W

Active mode efficiency, O/P < 6 V		
Rated power	Average efficiency	
	Tier 1 (1st Jan 2014)	Tier 2 (1st Jan 2016)
0 W to ≤1 W	≥0.5 x Pout + 0.086	≥0.517 x Pout + 0.091
>1 W to ≤49 W	≥[0.0755 x Ln (Pout)] + 0.586	≥0.0834 x Ln (Pout) - 0.0011 x Pout + 0.609
49 W to ≤250 W	≥0.88	≥0.88

Active mode efficiency, O/P ≥ 6 V		
Rated power	Average efficiency	
	Tier 1 (1st Jan 2014)	Tier 2 (1st Jan 2016)
0 W to ≤1 W	≥0.5 x Pout + 0.146	≥0.5 x Pout + 0.169
>1 W to ≤49 W	≥[0.0626 x Ln (Pout)] + 0.646	≥[0.071 x Ln (Pout) - 0.00115 x Pout] + 0.67
49 W to ≤250 W	≥0.89	≥0.89

EU Code of Conduct (Jan 1st 2014 and Jan 1st 2016)

10% Efficiency Requirement, O/P < 6 V		
Rated power	10% Efficiency Requirement	
	Tier 1 (1st Jan 2014)	Tier 2 (1st Jan 2016)
0 W to ≤1 W	≥0.5 x Pout	≥0.517 X Pout
>1 W to ≤49 W	≥[0.072 x Ln (Pout)] + 0.5	≥0.0834 X Ln (Pout) - 0.00127 x Pout + 0.518
49 W to ≤250 W	≥0.78	≥0.78

10% Efficiency Requirement, O/P ≥ 6 V		
Rated power	10% Efficiency Requirement	
	Tier 1 (1st Jan 2014)	Tier 2 (1st Jan 2016)
0 W to ≤1 W	≥0.5 x Pout + 0.046	≥0.5 x Pout + 0.06
>1 W to ≤49 W	≥[0.0626 x Ln (Pout)] + 0.0546	≥[0.071 x Ln (Pout)] - 0.0015 x Pout] + 0.57
49 W to ≤250 W	≥0.79	≥0.79

Energy Star (Nov 1st, 2008) & ErP (April 2011)

No load power limits	
Rated power	No load consumption
0 W to <50 W (≤ 51 W)	0.3 W
≥50 W to 250 W (> 51 W)	0.5 W

Active mode efficiency, O/P < 6 V	
Rated power	Average efficiency
0 W to 1 W	≥ 0.497 x rated power + 0.067
>1 W to ≤49 W (≤ 51 W)	≥[0.0750 x Ln(Rated power)] + 0.561
>49 W (>51 W)	≥ 0.86

Active mode efficiency, O/P ≥ 6 V	
Rated power	Average efficiency
0 W to 1 W	≥ 0.48 x rated power + 0.14
>1 W to ≤49 W (≤51 W)	≥[0.0626 x Ln(Rated power)] + 0.622
>49 W (>51 W)	≥ 0.87

Figures in () are for ErP limits

In addition, Energy Star power supplies with an input power of 100 W and above must have minimum power factor of 0.9 at 115 VAC 60 Hz.