

## 1. INPUT CHARACTERIZATION

### 1.1 EFFICIENCY / POWER FACTOR / INPUT CURRENT/ENERGY STAR

#### Test condition:

The unit is set at different load conditions and the input voltage is varied from the 20% and to the 100% value. Efficiency is computed and Power Factor is measured.

#### Test equipments:

AC Source :Chroma 6530

Electronic load : Chroma 6314

Power analyzer :Chroma 6630

Digital Multimeter :Fluke179/

#### Pass Fail Criteria:

Eff:  $\geq 70\%$  ( $V_{in}=115V_{ac}$  &  $230V_{ac}$ )

Efficiency  $>70\%$  at nominal voltage and the 100% to 20% load given within this spec

#### Efficiency at Max Load:

Input (V)	Frequency (Hz)	I <sub>in</sub> (Arms)	P <sub>in</sub> (W)	P <sub>out</sub> (W)	Dissipated Power (W)	Efficiency (%)	Power Factor
180	63	3.492	627	499.5	127.5	79.67	0.998
230	50	2.707	620	499.5	120.5	80.56	0.996
264	47	2.359	619	499.8	119.2	80.74	0.993

#### Efficiency at 80% Load:

Input (V)	Frequency (Hz)	I <sub>in</sub> (Arms)	P <sub>in</sub> (W)	P <sub>out</sub> (W)	Dissipated Power (W)	Efficiency (%)	Power Factor
180	63	2.727	490.	403.5	86.5	82.34	0.998
230	50	2.123	485	403.5	81.5	83.15	0.993
264	47	1.852	484	403.9	80.1	83.42	0.990

#### Efficiency at 50% Load:

Input (V)	Frequency (Hz)	I <sub>in</sub> (Arms)	P <sub>in</sub> (W)	P <sub>out</sub> (W)	Dissipated Power (W)	Efficiency (%)	Power Factor
180	63	1.698	303.0	253.30	49.7	83.60	0.993
230	50	1.324	300.8	253.60	47.2	84.31	0.988
264	47	1.157	299.8	253.8	46.0	84.66	0.982

#### Efficiency at 20% Load:

Input (V)	Frequency (Hz)	I <sub>in</sub> (Arms)	P <sub>in</sub> (W)	P <sub>out</sub> (W)	Dissipated Power (W)	Efficiency (%)	Power Factor
180	63	0.7102	123.9	102.3	21.6	82.57	0.970
230	50	0.5619	123.1	102.3	20.8	83.10	0.952
264	47	0.5002	122.6	102.3	20.3	83.44	0.929

Test Result:

PASS