

Novenver 19, 2007

JEITA's Comments on "ENERGY STAR® Program Requirements
for Single Voltage External Ac-Dc and Ac-Ac Power Supplies
Eligibility Criteria (Version 2.0)
Draft 1 "

JEITA International Energy Star Committee
(PC group)

1. Differences in efficiency due to input/output voltage

Efficiency is dependent on input/output voltage so we strongly recommend that separate efficiency criteria be set according to the EPS input/output voltage level.

Output voltage differs depending on characteristics and types of the products. The conformance rate for AC adapters with low output voltage or high input voltage is low. For those AC adapters, the conformance ratio and criteria of the draft 1 are not fair.

2. Criteria Value

1) EPA data and the conformance rate:

According the EPA data, the conformance rate for devices with an input voltage of 230V and which have a PF circuit is very low at 5/138 (3.6%). Considering that the CEC and other mandatory standards are based on the Energy Star standard, we strongly recommend setting the ver 2.0 criteria based on the data of a product range which have a difficulty in qualifying.

2) Problems with the 87% efficiency criteria:

We think that it is necessary to design products to meet 88% efficiency level in order to assure a minimum efficiency of at least 87% in all products when mass production variations are taken into account.

In the EPA data, the conformance rate for an 88% and over efficiency level is only 13.5% (61/452) so it is a very difficult standard.

3. Power factor

As far as an AC adapter is concerned, it is thought that improving power factor is almost equal to decreasing harmonic current. Therefore, JEITA thinks as follows, and wants you to harmonize the power factor requirement with a relevant international standard.

1) Characteristic of an AC adaptor.

"Downsizing and weight saving" are important on the commodity characteristic of an AC adaptor. Therefore, the product design of the downsizing, weight saving, and price-reduction is done in the range where it complies with the harmonic current standard (IEC61000-3-2) as for AC adaptor. Also, it is thought that improving power factor is synonymous with inhibiting harmonic current.

For this reason, to clear the harmonic current standard (IEC61000-3-2) for AC adaptor is sufficient. It will provide power factor of 0.85 or above.

The achievement of power factor 0.9 or more was relatively easy by use of the electric circuit (PFC: Power Factor Control) in a comparatively larger volumetric power supply like Desktop PC.

2) The question of a definition

While electric power is specified by output electric power in the draft, a restriction at 75W of input electric power is specified in IEC61000-3-2.

Is this a mistake? Or, did you make it as regulations of output electric power for convenience?

4. Schedule

In the case of adding new requirements, EPA should determine the criteria not only based on the qualification rate of sample products but taking product-development schedules into consideration. JEITA strongly recommends that we should have two years or more from the finalization of the specifications to have 100% of the products qualify, because ENERGY STAR criteria may become a mandatory requirement such as California Energy Commission regulation.

5. Safety regulation of the end product

All of electronic products are required to comply with IEC61000-3-2 (harmonic current emission), IEC61000-4-x(EMC), CISPR22(EMD) and IEC60950(Safety), and these certifications are granted to a whole product which includes EPS. We have a big concern that ENERGY STAR spec will be made only seeing sample data set of EPSs.

Basically, energy saving must be considered for a whole product, so we believe it's reasonable that a spec of EPS, a part of a product, stays just as a marking protocol (International Efficiency Marking Protocol) which just shows efficiency level, and ENERGY STAR should be applied only to a whole product.