



It's Time to End Class Discrimination

Discrimination is a hot topic everywhere in the world. It is even present in the electronics industry. It's time to get involved and stamp it out. Open up almost any industry performance document and you will find requirements based upon "class." PCB and PCBA performance has lived with an upper (class 3), middle (class 2), and lower (class 1) class for almost 40 years. You will find class 1, 2, and 3 requirement distinctions in almost all of the IPC's performance documents. This is a carryover from military standards where it was important to "classify" all products. I am still hoping to find the illusive

development of requirements for these performance classes required significant compromise between the various industry representatives that developed the standards, and, where it could not be reached, the phrase "As Agreed Upon Between User and Supplier" (AABUS) was inserted as a marker to remind the users that they must specify the performance requirement for that attribute. This adds ambiguity to the standard and gives no direction to the user for "industry accepted" performance requirements for the product.

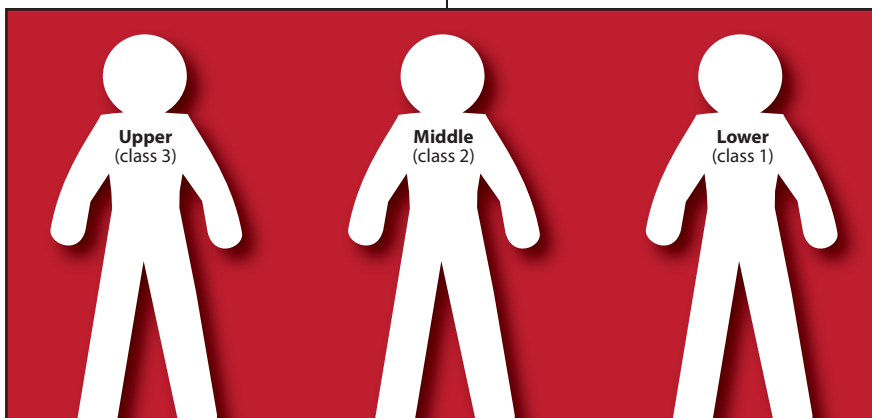
Another supporting point to the need for change is the fact that many users now write their own product performance specifications because the industry standard require-

to market segment needs rather than by generic acceptance class.

When the industry sat down to classify its future by creating a roadmap, distinction by class was nowhere in sight. The IPC roadmap does not classify products by class. Instead, it classifies products by end-use market segment. This roadmap for the future of the electronics industry defines eight market segments that cover the perceived needs for the future, and I am a strong believer that this segmentation should be reflected in our industry performance specifications. These IPC roadmap market segments are automotive, business/retail, computer, consumer, industrial, instrumentation, military/aerospace, and telecommunications. These segments may not be exactly what is needed, but they sure are a good place to start.

The only way to end this class discrimination is to actively participate in the change. The inevitable lack of adequate industry participation from users representing these market segments is the greatest roadblock to change. The military/aerospace segment has been working successfully to come up with its own set of performance requirements, but participation from other segments has been difficult to facilitate. Many are quick to criticize the standards but slow to actually participate in their development. Standardization is an industry effort and you can have an influence in development and change. Take the time to make your own statement class segmentation and sign on to contribute to the IPC standard development process. You can make a difference!

In the end, discrimination by class against electronic products must end, and we must make the effort to change our standards as each electronic product should be in a class all its own. ■



"class 1" product. Although sightings have been rumored, it appears to be extinct, as no one has been willing to admit to or classify their own product in this lowest of classes.

The use of performance classes in industry documents is based upon the assumption that with each reduction in class, the corresponding requirements for all performance attributes also reduce. This does not necessarily hold true for each end product, as the performance needs in one performance area may be high, whereas other areas of performance can withstand the effects of reduced requirements.

Our industry standards define these specific normalized performance attributes for each of the three defined classes and direct the industry to use them whether they are practical for the final application or not. The

requirements for class 2 or 3 do not fully meet their needs. Even with the proliferation of AABUS requirements, many users have discovered that it is just easier to create their own standards rather than amending industry ones. Then there are those who still see the value in using the industry standards as baselines and penciling in their own requirements when necessary.

This class segregation may have once had historical significance and useful application, but its time is past. For today's and tomorrow's products we need to redefine how we classify performance requirements. New technologies and increasingly divergent products make a segregation of performance into three groups virtually impossible. I believe that these requirements should be redefined as they relate

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