

'Qualification Road' a Treacherous Path

A proposed QML will cost OEMs and suppliers more - and won't solve the problem.



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THE APPARENT DISCONNECT between what OEMs want, insofar as PCB quality received versus what fabricators are shipping, was the focus of an article in the September/October 2008 addition of the *IPC Review*. The article, *The Road to Qualification*, claims OEMs are frustrated with fabricators that oversell capabilities by claiming "IPC-6012 certified" – a designation that does not exist. A

commissioned by IPC, the article says, is seriously investigating the necessity of such a program and its implementation.

My first reaction: disbelief. Here's my response to IPC. This proposed program is unnecessary because IPC already has in place an overabundance of documented educational, manufacturing and qualification programs specific to our industry. The numerous specifications and the educational seminars to ensure quality PCB and PCBA product are readily available and extremely adequate if both customer and manufacturer just use them.

Who is more to blame? The supplier who claims to be IPC-6012 certified or the OEM purchasing department that accepts that such a qualification exists? It is not the PCB fabricator, as the article implies, so much as it is the customer willing to live with the costs involved in receiving a fully documented/traceable PCB order. I can't tell you how many times I have heard, "We want IPC Class 2.5." In other words, "Give us the best quality without us spending a nickel more than we have to." The cost of quality is very real, and most OEMs either don't know how to document fabrication notes properly, ask us to ignore fabrication notes in favor of less documentation or simply don't want to pay for it.

More important, this road to "certification," as would more accurately, would not prevent quality problems from happening. Scrap will continue, sales people will continue to "oversell" their organization's capabilities and customers will continue to be naïve about the existence of the IPC quality programs already in place.

IPC does have a program for what I call a "voluntary qualification" called IPC PCQR2. This is a database of PCB manufacturers that have submitted test panels to demonstrate their capabilities of conductor and space width, via registration and reliability, soldermask registration and controlled impedance. There is a fee to participate, and the manufacturer is obligated to make occasional resubmissions in order to keep their data current. The con is that the fabricator produces a number of test panels and submits those it feels best represent its capabilities; in other words, no true first-pass yields. As such, this does not represent a

manufacturer's day-in, day-out capabilities but rather is a measure of data from a small set of test vehicles, that in some cases could be as many as two years old.

Interestingly, the published participating supplier list as of August 31, 2008, has at least one manufacturer that is no longer in business, several who outsource product through an overseas supplier (which begs the question, which of the orders are being built by the tested facility?) and a couple that I personally know have lost business because of quality issues. However, what I just mentioned does not negate IPC PCQR2 or the capabilities of those suppliers that have participated in this voluntary program, but rather underscores that ongoing supplier quality cannot be guaranteed by an external third-party program.

IPC needs to promote to fabricators *and* OEMs the existing documentation for proper board fabrication and the associated test vehicles for acceptance. They are "hit-or-miss," as the article notes, but old-fashioned education of both supplier and customer is all that's needed to ensure more of the hits and fewer of the misses. OEMs and EMS companies need to track their vendors' performance on product received and, when those data are not available, call a customer of a similar caliber of the manufacturer (aka a reference) to help define true capabilities.

Not to sound political, but my position is enforce the laws that are already on the books, don't create new ones. Because IPC, or this new proposed entity, would not be able to guarantee a manufacturer's quality or its product, implicit or otherwise, what value has IPC brought to its members and, more important, to the end-customers we serve?

Speaking of serving, has IPC, or anyone for that matter, studied with as much passion the numerous incidents of delamination associated with the use of higher Tg materials? If they have, great! But I haven't heard much of what I feel is a "real road" to a quality review that needs to be taken as our industry has been "railroaded" into Pb-free assembly.

As a responsible PCB distributor, we are willing to participate in an IPC commissioned committee to investigate and help resolve issues like qualification or certification as it relates to lead-free processing. The IPC needs to take this road, and many of us in the industry would like to help drive. **PCD&F**

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