NEW PACKAGING FOR PRINTED CIRCUIT BOARDS

Valuated customer,

As you know for sure, packaging is one of the key elements to ensure that printed circuit boards arrive to assembly lines in a perfect condition. Not only protection during transport is important, but also protection during the storage time, that can be long. Humidity absorption and metal finish degradation are some of the main dangers when the welding moment has arrived.

With the goal to improve even more the quality of our packaging, in the next weeks we are going to proceed to change from our existing polyamide/polyethylene bag to a new aluminium-based bag, which has technical characteristics strongly focused to its protective function.

Advantages of the new packaging

The key elements to consider are:

- Manufacturer: Advantek. Model Drylok 2300.
- It meets the rule EIA 541 concerning ESD protection, and also rule EIA 583 for humidity-sensitive material.
- MIL-PRF-81705D type 1, class 1. Military norm for flexible, antiESD, steam-resistant and thermo sealable packaging.
- Water steam permeability: <0,005 g s/ASTM F 1249
- Static shielding < 20 volts s/BA 541
- Punching resistance > 30 lbs s/ FTMS 101 MTH 2065

These characteristics make this bag highly capable to meet some goals that we consider very relevant:

- permeability to environmental humidity is several times smaller than the existing bag: as a consequence, drier content during more time.
- being ESD shielding, it can go inside ESD protected zones and coexist with sensitive components or devices, despite the naked printed circuit is not a sensitive component itself.
- thanks to its extremely high quality, the bag can be reused by our customers to protect and store their assembled pcb’s.

These better performances will allow us to remove the inner retractile plastic layer that our existing packaging still has today. Despite this, to achieve a higher humidity control we will keep adding a desiccant silica-gel bag (2 grams) inside each of our packages.
In the following pictures you can see the new aspect of the printed circuit boards inside the aluminium-based new bag:

![Current packaging](image1)

![New packaging](image2)

**Implementation calendar**

Our schedule is to start using the new alu-based bag in the first days of May. We also consider that both packing systems, old and new, can coexist during 2 or 3 weeks in which Lab Circuits can still use any of both systems. But after this transition time, the aluminium bag will be always the preference choice.

**Choice and cost of the new packaging**

*Adoption of the new bag is not a must.* Any customer can choose to keep its shipments in the former polyamide/polyethylene bag. If this is your case, please just let us know. Otherwise, the new aluminium-based bag will be applied as a rule just because of the big quality advantages that it offers.

We must say very clear that *existing prices will not be modified for reason of the packaging bag used*, so the existing pricelist will still be in force.

**Value of the vacuum**

We just want to point out that the vacuum level inside of the bag is not a quality *element* itself. Vacuum is only needed to keep the bag compact and also with the smaller volume possible inside the box. In fact, we will just use the minimum necessary vacuum to fulfil these functions; An excessive vacuum level would lead to higher humidity penetration and also higher punching possibilities.
Optimal handling of the package

The sealed bags having printed circuit boards must be handled carefully, in order to avoid undesired punching. **The bag should not be opened until usage moment is arrived.** But if it must be opened due to a quality control or similar, it is important to close it again leaving the desiccant inside. **It is possible to thermo seal the bag again,** using the right equipment.

We want to emphasize the need to handle the pcb’s with gloves, just to avoid soldability degradation. Inside all of our shipping boxes you will find the correct **Conservation and Handling Guidelines:** please, follow them.

We remain available to you for any request of additional information that you may have.

With our best regards,

José Muelas  
Quality manager, Lab Circuits