



CASE STUDY: Reducing Expendable Packaging While Creating an “Electrostatic Discharge” (ESD) Solution

Background & Challenge

Samsung's BDU Assembly contain sensitive interior electronics that if contaminated by electrostatic, could render the parts useless. Samsung was seeking a reusable packaging solution to replace their expendable packaging, as well as the expensive electromagnetic bag that was being used to wrap around the parts for protection against ESD.

Solution & Results

Samsung SDI ABS contacted Schaefer in the Summer of 2020 about developing a reusable packaging solution to protect its parts form ESD. The requirements were submitted to Shaefer's design team and several iterations were considered.

For Schaefer, the question always came back to "how does the static get to the ground?" Ultimately leading to the development of the **Grounder™** - a 48-inch-wide x 45-inch-long x 45-inch-tall plastic molded bin with metal plungers that direct all electrostatic to leave through the bottom of the bin, protecting the shipped electronic parts from electrostatic contamination while reducing expendable packaging materials.

Samsung had previous yearly volumes equal to \$3M in expendable packaging costs. The one time purchase of 105 of the new containers came to just under \$170,000. Samsung is expecting to add 40 more containers, adding another \$70,000. Saving well over \$2.5m.

In addition, due to the 48x45 size of the new bin, Samsung could stack two unit loads high, yielding a total of 80 parts in a 48x45 footprint. Schaefer's solution doubled part yield with 80 per side load bulk bin, saving half the floor space previously used with expendable packaging.



Market(s):

Multiple

Solutions:

Design reusable packaging bin with a solution to eliminate electrostatic discharge and protect Samsung parts during shipping

Key Outcomes:

- New bin contains a metal plunger that carries the static electricity to the outside of the bin, without harm to parts
- Samsung was able to discontinue use of ESD bag and expendable packaging - saving millions of dollars in assembly packaging
- A second benefit of the new bin offers more efficient packaging, taking up less warehouse space