

EXAMPLE OF QUALITY ASSURANCE PLAN

(This was developed for a simple electronic product that was to be produced in more than 1 million pieces.)

I. Initial information requested by Sofeast

- a) Production & shipment schedule, with quantities
- b) Product features, including user manual if available, and other detailed product & packing specifications
- c) List of components with description and, wherever possible, specifications/MSDS

II. Phase 1: Quality documents preparation

- a) Create a quality control plan:
 - Evaluate which components are the most critical: we can offer our opinion, free of charge.
 - QC checklist for the complete product – \$79 USD (client or supplier to send us a sample, for better results) for a simple product checklist, an extra \$49 USD for a simple packaging checklist, and an extra \$149 USD for suggesting more details (tolerances, etc. but does not include back & forth discussions).
 - Divide it into QC checklists for each of the components that will be visible (covering the aesthetic elements on the outside of the product only): \$79 USD.
 - Translating the above checklists into Chinese, as needed: \$34 USD per hour (initial estimate of 5-8 hours).
 - Factory audits (quality system, capacity, readiness of tooling): \$475 USD per factory. It would be beneficial to audit these factories:
 - PCBA & assembly
 - Battery cells & packs
 - Motor
 - Plating
 - Silicone
 - Plastic
 - Factory audits (social compliance): \$475 USD per factory – on the assembly factory. In case the assembler was already audited before and can show a nice audit report, we can check if that report is real (for \$100 USD).
 - Product reliability testing, and packaging vibration/drop testing. See separate Excel file (\$1,982 USD).
 - Production updates for your Quality team: A Shenzhen-based Sofeast Project Manager will contact your suppliers by phone and email for this information \$34 per hour, billed in 0.25 hour increments.

- b) Identify risks and setting controls in PCBA and final assembly: process FMEA (<https://www.sofeast.com/glossary/fmea-failure-modes-and-effects-analysis/>) + process control plan (<https://www.sofeast.com/glossary/process-control-plan/>). Estimate of 4 days at the assembly factory, assuming their cooperation, at \$300 per day. These documents will also plan for incoming QC on the components, as well as outgoing QC on the final product.
- c) Select part samples with imperfections (to illustrate boundary samples), send to your Quality team for confirmation, dispatch to the relevant parties: \$34 per hour + expenses (rough estimate if we manage this: \$206 USD).

Note: [client] indicated to be fully aware of applicable compliance regulations had already conducted testing on previous batches of this product. Therefore, compliance certifications & testing is left out of this plan.

III. Phase 2: On-site inspections, production monitoring, and testing

- a) Product inspections at various stages of production: final components inspection, in-line inspection at assembly factory, final inspection at assembly factory. \$299 USD per man-day, which includes customary advanced preparation, the on-site service, and reports emailed to the client within one business day.

Assembly factory

- We'd suggest 1 inspection during production (DPI – 1 man-day) and 1 final random inspection (FRI – 2 man-days) for each batch.
- Special case for batches 1 and 2: since the assembly factory also does the SMT process (PCBA), we suggest doing 2 DPIs: 1 inspection during production (DPI – 1 man-day) when some PCBAs are ready, and 1 inspection during production (DPI – 1 man-day) when some completed products are ready. For batches 3 to 5, what we suggest above probably make more sense if no issues were detected on the PCBA.
- For the FRI, we would follow the ISO 2859-1 standard, normal severity, level II, which gives us 500 or 800 pcs to check visually (depending on order quantity). The on/off test would also be done on that sampling.
- In special level S-1, we would run a full function test, a fatigue test, an internal test, a battery voltage check, among others.
- We are assuming 5 shipments, from 75k pcs to 200+k pcs. The amount of work for the FRI is the same whether it is 75K or 230K pcs.
- Total for assembly: 17 man-days of work.
- Depending on the findings on components quality (and on this factory's systems when it comes to incoming QC) and/or in the first DPI, this plan could be made tighter (if we see many risks) or looser (if things are on a good track).
- Make sure your supplier agrees to give a rebate if there are failed inspections ([the client] should have the right to do re-inspections, and you should not pay for it in the end). This would ideally be addressed in a contract between [the client] and the supplier.



Component factories

- We'd suggest 1 inspection during production (DPI – 1 man-day) for each batch, in each factory making a critical component (we are planning this for 5 sub-suppliers: batteries, motors, plating, silicone, plastic).
- We are assuming 5 batches, from 75k pcs to 200+k pcs. The amount of work for the DPI is the same (1 man-day will be sufficient each time, unless serious issues are found).
- Depending on the auditing findings and on the inspection findings, this plan could be made tighter or looser.
- We will assume that 2 or these 5 sub-suppliers pass audits and inspections with flying colors, and inspection stop at these 2 sub-suppliers after the 2nd batch.
- Total for component factories: 21 man-days of work (3 x 5 + 2 x 3).

Grand total for quality inspections: 38 man-days of work.

- b) Battery testing: lifetime testing on a working model (measuring the current and voltage with a multimeter) is simple and is the bare minimum you should do (\$80 USD). If you get a specification sheet for batteries, please send it to us and we will refine the plan.
- c) Troubleshooting and implementation of corrective actions: to be quoted based on the specific issues and factory location. \$42 USD per hour for off-site follow-up, or \$300 USD per day if on-site.

IV. Terms:

Pre-payment for testing services. Payment terms of Net 10 Days for other services. All services offered according to Sofeast's standard Terms & Conditions (attached).

* End of Document – Thank You *