

# Why Surface-Mount Technology Component Substitution Matters in Your Repairs

## The Risks of Incorrect Component Substitution

When it comes to your equipment, reliability and performance are everything. Using the correct components for repairs isn't just about replacing parts—it's about maintaining the quality, stability, and efficiency of your system for years to come. Discover why choosing the right Surface-Mount Technology (SMT) components for your repairs is key to avoiding costly failures and ensuring long-term success.

## The Impact of Incorrect vs. Correct Component Substitution

### FAILED REPAIR



- **Non-SMT Capacitors:** Causes electrical and mechanical mismatches.
- **Higher Failure Risk:** Leads to unreliable system behavior.
- **Power Rail Instability:** Excess lead inductance destabilizes the system.
- **PCB Damage:** Non-SMT components stress SMT pads.
- **EMI Interference:** Causes resets and touchscreen faults.
- **Reduced Capacitor Life:** Overheating from thermal mismatch.

### CORRECT REPAIR



- **SMT Capacitors Restored:** Ensures proper functionality and performance
- **Exact Specifications:** SMT components meet designed ESR, inductance, and stability.
- **Long-Term Reliability:** Correct components guarantee lasting performance.
- **Like-for-Like Replacement:** Only SMT components that match the original design.
- **Non-SMT Substitutions Void Warranty:** Non-SMT parts aren't covered.
- **OEM Design Compliance:** Repairs must match the original design for optimal performance.