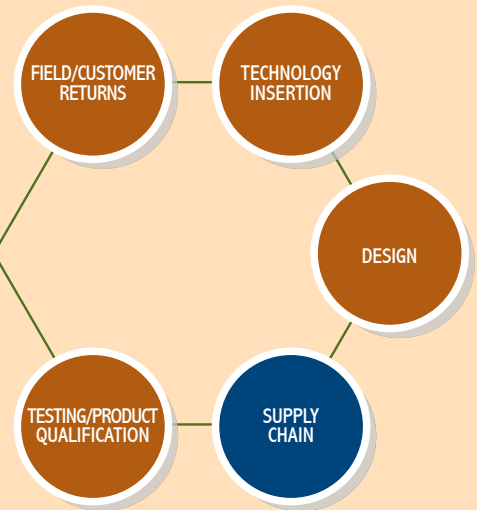


# Supply Chain

## *Whom Do You Trust to Take Your Design And Make It A Product?*

**DfR Solutions Can Help You Find the Most Reliable and  
Cost-Efficient Resources**



In today's competitive business environment, companies like yours are looking to lower operating costs and increase productivity. However, your product is only as reliable as the quality of its supplied components. You need to acquire the right products in the most resource-effective manner without sacrificing quality.

Your market share is driven by price. Combine that with designs that can include parts from hundreds of different manufacturers and complex circuit boards and assembly operations, and it is clear that the suppliers you choose must be carefully considered. Through continuous component-level testing, supplier evaluations, and extensive connections throughout the entire supply chain, DfR Solutions is able to stay abreast of the ever-changing electronics field. We can help you determine component and contract suppliers that will provide you with the best value performance to take your initial design to final product.

DfR offers multiple solution paths for ensuring a quality supply chain. Each solution is specifically tailored to each company's production volume, design complexity, and cost requirements. By using DfR's specifications your company can reduce its exposure to supplier issues without incurring cost or resource increases.

### Services:

- Component-Level Testing
- Development of Supplier Qualification Documents
- Supplier Evaluations
- Construction Analysis
- Statistical Process Control Evaluations

## **DfR Bases Each Solution on the Understanding That the Electronics Supply Chain Can Be Separated Into Two Categories: Commodity and Engineered**

A range of options exist to ensure the quality and reliability of commodity components:

- Segregation of out-of-control lots
- Periodic on-site audits
- Periodic construction analysis
- Periodic life testing
- Component specifications beyond standard industry practice
- Initial on-site audit
- Initial construction analysis

#### Commodity Options continued

- Initial life-testing
- Demonstration of statistical process control parameters (Cpk and AOQ)
- Component specifications that mimic standard industry practice
- Requirement of a particular quality system (ISO9000, QS9000, etc.)

#### DfR offers the following services for ensuring the quality and reliability of engineered components:

- Supplier identification
- Gap analysis of existing internal specifications
- Technical capability audits
- Correlation of technical capability with product complexity for supply chain optimization
- Tracking of critical to quality parameters
- Initial and periodic construction analysis
- Identification of relevant industry standards and tools for low-cost assessment
- Development of auditing and screening procedures for infant mortality minimization
- Supplier Intervention

#### Available Case Studies

- Film Capacitors
- Electrolytic Capacitors
- Ceramic Capacitors
- Polymeric Capacitors
- Tantalum Capacitors
- Printed Circuit Boards
- Circuit Card Assemblies
- Transformers
- Connectors

#### Who We Are

DfR was initially formed by several senior scientists and staffers from the University of Maryland's Center for Advanced Life Cycle Engineering (CALCE) for Electronic Product and Systems, and has now expanded to include personnel with backgrounds from several industries (automotive, avionics, contract manufacturing, industrial controls, and superconductors). With years of experience in QRD research and consulting, the personnel at DfR are motivated to provide knowledge and science-based solutions to maximize and accelerate the product integrity and assurance activities of their clients.

#### How Can We Help You?

For more information about DfR Solutions' Supply Chain Services, or any of DfR's other services, seminars or products, call us at **301-474-0607** or email [askdfr@dfrsolutions.com](mailto:askdfr@dfrsolutions.com).

#### *Let DfR Solutions Take Your Reliability Concerns... and Make Them Ours*

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