



105 Wilbur Place Bohemia New York 11716-2482  
Tel: (631) 567-5600 Fax: (631) 244-8252  
www.ddc-web.com

## **DDC Standard Product Quality Provisions**

### **1.0 Quality Management System:**

DLA has advised that PDC can utilize the DDC hybrid manufacturing process that is certified to MIL-PRF-38534 by DLA Land and Maritime. Evidence of certification is available on our website (ddc-web.com) or can be provided upon request.

### **2.0 Quality Flow Down to Sub-Tier Suppliers:**

DDC and PDC's Quality Management System ensures that all necessary purchase order requirements for DDC and PDC's standard product are flowed down to sub-tier suppliers via Quality Assurance provisions listed on the DDC and PDC purchase orders.

### **3.0 Quality Record Retention:**

Quality records as defined within the AS9100 Standard section 7.5 are retained indefinitely in electronic format. Paper records are stored for 7 years. The records are retrievable within 5 business days.

### **4.0 Government/Customer Source Inspection:**

Pre-cap and Final Source Inspection of product is available if required and funded by purchase order.

### **5.0 Change Control Requirements:**

DDC and PDC products meet its current published data sheets for form, fit and function. Customers will be notified of any major changes to product that may impact form, fit or function as well as any major change for hybrid products as specified in MIL-PRF-38534.

### **6.0 No Pure Tin Finishes:**

#### **Components:**

Hermetic hybrid products manufactured by DDC and PDC are processed in accordance with requirements specified in MIL-PRF-38534. These requirements do not allow a lead-free solder termination finish. DDC and PDC's base hybrid products will be excluded from the EU Directive since they are used in high reliability/military applications. These products will only be supplied with lead-free solder when specified and accepted by DDC or PDC.



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Many of these products without a solder lead finish can be considered to be RoHS compliant. Our Ball Grid Array products are in certain cases offered as either leaded or RoHS compliant.

**Circuit Card Assemblies (CCA):**

In some cases DDC and PDC offer CCA products that are supplied with tin-lead solder and are excluded from the EU Directive because they are used in high reliability/military applications. In other cases DDC and PDC offer CCA products that are RoHS compliant because they are used in less critical applications.

7.0 **Foreign Object Debris:**

DDC and PDC ensure that **Foreign Objects** and subsequent **Foreign Object Damage (FOD)** are eliminated from all parts prior to shipment. DDC and PDC are maintaining a FOD free environment during manufacturing, assembly, maintenance, inspection, storage, packaging and shipping. In addition, there are no foreign objects (I.E staples, peanuts, packaging material that leave residue) used in packaging of DDC and PDC products for shipment.

8.0 **Preference for Domestic Specialty Metals:**

DDC and PDC standard product is defined as a “Commercial off the Shelf” as well as “Electronic Component”; therefore it is exempt from the requirements of DFAR 252.225-7014.

9.0 **Nonconforming Material:**

All nonconforming material is properly identified and segregated upon detection. DDC and PDC will not ship known nonconforming material without prior written approval from the customer. If it is determined that nonconforming material was inadvertently shipped to the customer, DDC or PDC will notify the appropriate buyer immediately.

10.0 **Electrostatic Discharge Controls (ESD):**

All parts and/or assemblies are protected from ESD damage during manufacturing, handling, packaging and shipment. DDC and PDC’s ESD control system meets the requirements of MIL-STD-1686.

11.0 **Special Process Control:**

There are no special processes (as defined by AS9100D) performed at DDC and PDC.



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12.0 **Soldering Requirements:**

Soldering workmanship complies with MIL-PRF-38534 or IPC-610 Class 3, based on the product technology ordered (I.E Hybrids or CCA's).

13.0 **Certificate of Compliance:**

DDC or PDC's standard C of C is included with each shipment. This document is legible, reproducible and contains the following information as a minimum:

DDC or PDC name, Address & Cage Code

Customer's Name and Address

Purchase Order No., DDC or PDC Sales Order No.

DDC or PDC Part No.

Quantity of Devices

Date Code(s)

Signature, Date and title of signee

Conformance Statement which certifies that material supplied conforms to all applicable specifications and that all functional tests and inspections have been performed using measuring and test equipment that is traceable to the US NIST in conformance with ANSI/NCSL Z540. All pertinent traceability, test and inspection data is retained at DDC and PDC. DDC and PDC also certify that material is new and not counterfeit. If the product is a MIL-PRF-38534 Compliant Hybrid, DDC and PDC also include the associated Class level and a statement certifying QML Microcircuit Conformance and Traceability.

14.0 **MRB Authority:**

DDC and PDC retain full MRB authority on its standard products.

15.0 **Packing/Packaging:**

DDC and PDC follow the best commercial industry standards for packaging and shipping. All products are packed to prevent damage or corrosion during shipment. DDC and PDC's packaging do not contain newspaper wadding, loose-fill dunnage, macerated (shredded) paper, any packaging material which may cause Foreign Object Damage (FOD) or part contamination, part obstruction or leave non-preservation residue. Product with different date codes may be mixed in the same container.



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16.0 **Traceability:**

DDC and PDC maintain full traceability information for all material, parts and assemblies used in fabricating the product by use of part and serial number tracking. Material traceability is maintained from procurement through to final product acceptance utilizing incoming inspection QC Log numbers, which are linked to manufacturing traveler identification numbers for end item assembly. DDC and PDC maintain records that provide evidence that delivered product meets the requirements of Purchase Order. Records include: inspection data, test data, Purchase Order, C of C, and Travelers. See 3.0 Quality Record Retention for retention time and availability.

17.0 **Corrective Action Requests:**

DDC or PDC will investigate and determine Root Cause(s) and will provide a formal response to any supplier corrective action request (SCAR) within the time frame indicated on the SCAR. If for any reason the due date cannot be met, DDC or PDC will contact the customer and request an extension. Corrective Actions will be implemented and monitored for effectiveness to ensure that the Root Cause conditions are eliminated.

18.0 **Counterfeit Part Prevention:**

It is DDC and PDC's policy to only procure components from Original Equipment Manufacture's (OEM's) or Authorized/Franchised Distributors. DDC and PDC have a Counterfeit Parts Prevention Program in place that is designed to meet the requirements of Aerospace Standard SAE AS6081 (Counterfeit Electronics Parts, Avoidance, Detection, Mitigation and Disposition) and includes authenticity testing when necessary. When components are only available from an Independent Distributor, they will be sent out for authenticity testing at a lab that is certified to AS6081. DDC or PDC will then send the test results and a letter requesting customer approval prior to using the parts.

19.0 **Moisture Sensitive Components:**

Moisture sensitive components are processed, packaged and identified IAW IPC/JEDEC J-STD-020 and IPC/JEDEC J-STD-033.



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## 20.0 **Test Data:**

All DDC and PDC products are 100% electrically tested.

Final electrical variables test data or Group A variables test data is available in electronic format. Variables test data is the recorded parameter limits for each device at operating temperatures.

Test data includes:

- Part Number
- Serial Number
- Test Date and Time
- Test Technician name or Operator number
- Test Parameters
- Test results (Pass / Fail)

This must be requested and funded at time of order.

Group "A" Attributes data is available in electronic format. Attributes data is a summary sheet of the quantity of devices through each subgroup of electrical testing at each temperature. This must be requested and funded at time of order.

Test data is provided on CD, with the CD label containing the following information:

- Customer
- Purchase order number
- DDC or PDC part number
- Sales order
- Date of shipment

## 21.0 **Mercury:**

DDC and PDC products do not contain mercury.

## 22.0 **Ozone Depleting Substance:**

DDC and PDC products do not contain ozone depleting substances.

## 23.0 **First Article Inspection:**

If required, a First Article Inspection (FAI) report can be provided using DDC and PDC's format or SAE AS9102. This must be requested and funded at time of order.



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24.0 **Calibration:**

All products are inspected, assembled and tested using calibrated test equipment and measuring tools. DDC and PDC's calibration and control system conforms to the requirements of ANSI Z540. All standards are traceable to the National Institute of Standards and Technology (NIST).

25.0 **Right of Access:**

Access to appropriate facility and applicable records will be provided to the Customer, Regulatory Authorities and Government Representatives upon request and a mutually agreeable time.

26.0 **Marking Permanency:**

DDC and PDC's printed label marking meets the marking permanency requirements of MIL-STD-883, TM 2015 and MIL-STD-202, TM 215.

27.0 **ITAR controlled product**

It is the policy of DDC and PDC to comply fully with all applicable U.S. laws and regulations, including the Arms Export Administration Act including the International Traffic in Arms Regulations (ITAR), the Export Administration Regulations, and the regulations administered and enforced by the U.S. department of the Treasury's Office of Foreign Assets Control (collectively, U.S. Export Control Laws and Regulations).

28.0 **Supplier Performance**

Suppliers are selected, monitored and their performance is periodically evaluated in accordance with DDC and PDC's process.

29.0 **DDC Performance Rating**

DDC and PDC measure Customer Satisfaction by monitoring Customer Quality and Delivery Ratings. Customer Rating data is entered into DDC or PDC's database and periodically reported as part of Management Review. Ratings below DDC and PDC's target are evaluated and the customer is contacted, ensuring that appropriate action can be taken to improve DDC or PDC's performance.