



**13000 Gregg Street, Suite C
Poway, CA 92064**

TEMPLATE# 7942967: Rev 2



FSCM NO.

7NV27

Title: **QUALITY ASSURANCE PROCUREMENT CLAUSES**

COMPUTER CONTROLLED DOCUMENT
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QUALITY ASSURANCE PROCUREMENT PROVISIONS; SPACE BU

Quality requirements, in addition to those shown on the procurement specification, or engineering drawing are listed by numbered paragraphs on the purchase order with reference to this document, and must be complied with. Furthermore, applicable requirements must be flowed down to sub-tier suppliers including key characteristics where required.

All suppliers must meet the General requirements detailed in section 1 “General”. This is required within the applicability to the products and services provided. If a clause from a PO, or associated clause referenced from Table II commodity is incorrect, please contact the buyer for the clause to be reviewed and waived.

1. GENERAL

INITIAL SHIPMENT. The initial shipment of seller-controlled products must be accompanied by one legible copy of seller’s applicable drawings, specifications, catalog pages, material safety data sheet, or other material data sufficient to permit PDC incoming inspection, test, and acceptance.


REPAIRS. Seller acceptance of artificial repair (i.e. welding, peening, etc.) of characteristics found to depart from requirements of PDC, Seller, or PDC Customer designs or specifications will not be accepted by PDC.

CORRECTIVE ACTION. Prompt action shall be taken to detect and correct conditions, which have resulted, or could result in the production of nonconforming articles. Seller’s corrective action system shall cover all phases of manufacturing system activities from material procurement through delivery of articles to PDC including corrective action with Seller’s suppliers. Seller shall respond promptly to PDC request for reports describing action taken to correct the cause of deficiencies found in articles submitted to PDC, and to prevent their recurrence on subsequent submittals.

REPLACEMENT OF REWORKED MATERIALS. Replacement of reworked materials submitted by the seller following PDC rejection must be segregated and shown as separate items on the sellers’ shipping documents and certifications. Sellers’ shipping documents and certifications must identify these items as “replacement”, or “reworked” units, and must reference the number of the PDC discrepancy report on which they were rejected.

QUALITY RELIABILITY SYSTEM. Compliance with the requirements of a quality/reliability system clause as specified (see section 2) in no way relieves the seller of the final responsibility to furnish acceptable suppliers or services. In the case of revisions to specifications governing quality/reliability systems, the latest revision in effect on date of invitation for bids shall apply. Any changes made to

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specifications governing quality/reliability systems after invitation for bid shall be submitted to PDC for review/approval. By reference in the applicable governing specification, the seller becomes the “contractor” or “supplier”. The Sellers’ quality/reliability system(s) shall be subject to audit by PDC representatives, representatives of the prime contracting agency, and/or regulatory authorities.

CERTIFICATIONS. When certifications are required (See Section 4), the Seller shall, with each shipment, furnish one legible and reproducible copy of a certificate of conformance containing a full and complete statement meeting the requirements of the specific clause and signed by a responsible representative of the Seller. Where at all possible, the Seller is encouraged to combine statements in one certificate to include the requirements of two or more clauses when more than one certification clause is specified. Records, as objective evidence attesting to certifications required, must be maintained on file at Sellers’ facility subject to review by PDC representatives, representatives of the prime contracting agency, and/or regulatory authorities.

RECORDS/REPORTS. Records and/or reports reflecting observance of inspection, and test instructions must be maintained on file at the Sellers’ facility, subject to review by PDC representatives, representatives of the prime contracting agency, and/or regulatory authorities for a period of no less than 7 years, a longer retention period when required will be as specified on the purchase order or other referenced documents, specifications, etc.


RIGHT OF ACCESS. PDC, along with our customer and regulatory authority, will retain right of access to applicable areas and documented information at any level of the supply chain.

SUPPLIER AWARENESS. The supplier’s organization and personnel shall be aware of:

- 1) Their contribution to the product of service they are offering and commitment to the conformity.
- 2) Their contribution to product safety
- 3) The importance of ethical behavior

IDENTIFICATION/TRACEABILITY. The Seller shall identify parts/materials by name, part or code number, specification number, lot number, type, size, etc. Identification marking of parts/materials shall be in accordance with purchase order, drawing, and/or specification requirements. In the absence of specific marking requirements, marking must be accomplished by use of decal, rubber stamp, metal tag, etc. Where it is not practical to mark individual items due to size, shape, or deleterious effect, the identification data (including quantity) shall be marked on the smallest package of units packaged by the Seller. This identification, including any special handling condition, must be recorded on certifications and on the parts/materials. Records of identification and traceability shall be maintained on file at Sellers’ facility, subject to review by PDC representatives, representatives of the prime contracting agency, and/or regulatory authorities, for a period of no less than 7 years, a longer retention period when required will be as specified on the purchase order or other referenced documents, specifications, etc. Revision level of parts shall be the current revision at the time of order acceptance. Revision level of PDC drawings will be provided with the purchase order. If not received, the supplier shall request the drawing prior to acceptance of the order.

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PDC DESIGN. Acceptance of non-conforming parts is the prerogative of PDC. Discrepant parts may be presented for consideration on a PDC NCPAR (Nonconformity/Preventive/Corrective Action Report) form (forms should be requested from PDC when required). The supplier is responsible for identifying those parts and its paperwork with the appropriate NCPAR number.


CHANGE NOTIFICATION. Seller is responsible to notify PDC in writing of all process changes that occur which affect form, fit or function. Other change notifications required prior to order acceptance, and before shipment include:

- a) Change in manufacturing location
- b) Change in packaging which is not verified for conformance of product safety
- c) Change in Quality management system which includes management personnel or business structure
- d) Change is Qualification testing methods of product.
- e) Change in regulatory approvals of QPL product, testing approvals, or other regulatory information.

PROHIBITIVE MATERIAL/PRACTICES EXCLUSIONS. By certifying to any P.O. invoking the General QA Clause #1, the Seller certifies that materials furnished under this purchase order DO NOT contain the following:

- a) Zinc chromate as a finish coat.
- b) Pure tin plate (fused or un-fused), un-fused tin lead plate, cadmium, or zinc as a finish coat.
- c) Cadmium, Zinc, or Selenium, except internal to hermetically sealed devices.
- d) Die protection via organic materials without underlying glass passivation.
- e) Silver-cased electrolytic (wet slug) tantalum capacitors.
- f) Tin plated wire in crimped wire terminations.
- g) Mercury and compounds of mercury.
- h) Corrosive silicone sealants, adhesives, or coatings (acetic acid evolving silicone). Use of silicone greases as a thermally conductive material.
- i) Asbestos-containing adhesives, sealants, coatings, and encapsulants.
- j) Cyanoacrylate bonding materials.
- k) Alloys with stress corrosion threshold in any grain direction less than 25 ksi.
- l) Aluminum alloys 5083-H32, -H38, or 5456-H32, -H38 where the temperature will exceed 150F.
- m) Materials that exhibit or are known to exhibit natural radioactivity (such as uranium, potassium, radium, thorium, and/or any alloys thereof).
- n) Materials with radioactivity > 1mC shall not be used in any instrument design.
- o) Vinyl (poly-vinyl-chloride) as insulation for electrical hook-up wiring.
- p) Teflon as insulation for electrical hook-up wiring (does not apply to Teflon-insulated coax cables)
- q) Non-hermetically sealed crystals.
- r) Exposed junction or alloy transistors.
- s) Devices employing moisture getters.
- t) Non-captivated connector contacts in coaxial connectors.
- u) Non-conformal coated populated printed wiring boards unless conformal coating adversely affects performance.
- v) Stacked components both passive and active.
- w) SMA connectors that do not meet the requirements of appropriate MIL-C-XXXXX documents.
- x) RF coaxial cables using center conductor as a pin contact.

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- y) Multi-contact connectors that do not meet the requirements of MIL-C-XXXXX documents.
- z) Parts with any low temperature solder (melt at less than 225C) used as internal solder for construction.
- aa) Class 1 Ozone Depleting Substances (ODS) shall not be used in the design, test, manufacture, integration, and assembly, handling, transportation, operations, maintenance, or disposal of the instrument.
- bb) The use of pink-poly bags, film, bubble-wrap or foam as packaging.
- cc) DRC Conflict Minerals (As defined by the 2010 United States legislation, Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502 (“Dodd-Frank”), conflict minerals include tantalum, tin, tungsten, and gold originating in the Democratic Republic of the Congo.)

Compliance with Laws (EAR, ITAR, OFAC).

Seller shall comply with all laws and regulations, including, but not limited to, those pertaining to port laws and restrictions and regulations of the Department of Commerce, the United States Department of Treasury Office of Foreign Assets Control (“OFAC”), or other United States or foreign agency or authority, and not export, or allow the export or re-export of any Product (or any product incorporating such Product) in violation of any such restrictions, laws or regulations (including, without limitation, export or re-export to destinations prohibited either in Country Groups Q, S, W, Y or Z country specified in the then current Supplement No. 1 to Section 770 of the U.S. Export Administration Regulations (EAR) (or any successor supplement or regulations), or the OFAC regulations found at 31 C.F.R. 500 et seq.). The contractor shall comply with existing export laws under the EAR and ITAR (including registering with DDTC, as required under the ITAR for all manufacturers of defense articles, regardless of whether the manufacturer is actually exporting any defense articles); and the contractor shall flow-down the compliance requirement to all subcontracts that are expected to involve export-controlled items.

DFARS Preference for Domestic Specialty Metals

252.225-7014 Preference for Domestic Specialty Metals.

(a) *Definitions.* As used in this clause—

(1) “Qualifying country” means any country listed in subsection 225.872-1 of the Defense Federal Acquisition Regulation Supplement.

(2) “Specialty metals” means—

(i) Steel—

(A) With a maximum alloy content exceeding one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or

(B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium;

(ii) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent;

(iii) Titanium and titanium alloys; or

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(iv) Zirconium and zirconium base alloys.

(b) Any specialty metals incorporated in articles delivered under this contract shall be melted in the United States or its outlying areas.

(c) This clause does not apply to specialty metals—

(1) Melted in a qualifying country or incorporated in an article manufactured in a qualifying country; or

(2) Purchased by a subcontractor at any tier.

Qualifying Countries:

Australia

Belgium

Canada

Denmark

Egypt

Federal Republic of Germany

France

Greece

Israel

Italy

Luxembourg

Netherlands

Norway

Portugal

Spain

Switzerland

Turkey

United Kingdom of Great Britain and Northern Ireland

COMPLIANCE WITH REACH. The European Union (EU) has adopted regulation no. 1907/2006, also known as the REACH (Registration, Evaluation, and Authorization of Chemicals) regulation, which became effective 1st June 2007. REACH requires suppliers to identify the presence of Substances of Very High Concern (SVHCs) identified on the Candidate List maintained by the ECHA (European Chemicals Agency). In accordance with Article 33 of REACH, suppliers of product must communicate the presence of any Candidate List substances present in the delivered product at a concentration of >0.1% by weight to their direct customers, and upon request to end users.

The current Candidate List of SVHC's can be found at the following URL:

<http://echa.europa.eu/web/guest/candidate-list-table>

Please identify product sold to Power Device Corporation Inc. that contain > 0.1% by weight any of the substances identified on the candidate list in the following format and include the information in the shipment.

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Supplier Name		E-Mail		
Company Product Number	Substance On Candidate List >0.1 weight %	CAS Number (if available)	Concentration of Substance (weight %)	total weight of product (g)

As there is no statutory information duty for your company as long as no SVHC > 0.1% by wt. listed on the candidate list are contained in articles provided to us, we keep on assuming the absence of such SVHC's with respect to articles delivered without any information according to Article 33 REACH.

PACKAGING FOR DELIVERY. Items require protection from physical and mechanical damage. Protection shall be by wrapping, cushioning, part compartmentalization, use of cartons, or other means to mitigate shock and vibration during handling and shipment. Part surface must be protected if wrapped in plastic or bubble wrap. Protection shall be provided to maintain leads and terminals in the manufactured condition under handling and transportation environments. Materials used for this protection shall be non-corrosive, and if E.S.D. sensitive items are included, provide protection against triboelectric generation of static electricity.

The use of pink-poly bags, film, bubble-wrap or foam is prohibited. Metalized static shielding bag is the preferred alternative.

E.S.D. SENSITIVE ITEMS. If the package contains E.S.D.S. items, then the outer surface of the package shall be marked with the following caution statement: "CAUTION NOTE, OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE ITEMS."

COUNTERFEIT PART CONTROL The seller shall implement a counterfeit part control plan that complies with the requirements of AS 5553 for any electronic parts incorporated into final deliverable product. Components shall be purchased from Original Equipment Manufacturer (OEM) or OEM authorized distributor, purchase from independent distributors shall be approved by Power Device Corporation Buyer in writing.

DPA Destructive Product Analysis may be conducted on articles delivered to confirm all requirements are met. Any product that fails DPA may be rejected and returned.


ADDITIONAL QUALITY ASSURANCE CLAUSES Aside from the requirements listed in Sections below, the purchase order may have End User flow down clauses listed on the order. Confirmation of these clauses is required at the acknowledgement of the receipt of order. Any clause that is not achievable/deliverable, must be indicated for exception prior to shipping.

In addition to the General Quality Control System Requirements summarized in section 1, the Seller shall be responsible for compliance to paragraphs referenced on the purchase order.

2. QUALITY/RELIABILITY SYSTEMS.

- A. **MIL-Q-9858 or ISO 9001.** The manufacturer shall implement and maintain a quality control system that complies with the requirements of specification MIL-Q-9858 or ISO 9001.

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- B. **AS9100.** The manufacturer shall implement and maintain a quality control system that complies with the requirements of AS9100 (Quality management system standard for the aerospace industry).

3. INSPECTION/SURVEILLANCE.

- A. **PDC Source Inspection.** PDC has the right to perform inspection /test of products/services at the supplier’s facility prior to each shipment. The earliest notice possible shall be furnished to PDC regarding the Sellers’ plans for incoming in-process, final assembly inspection/test of products or services to permit mutual Seller and PDC schedule and understanding of each inspection points magnitude. If required, the Seller shall furnish reasonable access to relative contract, design and specification data and necessary equipment and space to perform such inspection/test unless otherwise waived by PDC.
- B. **PDC Source Surveillance.** All items covered by this purchase may be subject to source surveillance by PDC Quality Representative. This will include surveillance of the Sellers’ system, procedures, facilities, and products. The Seller shall at no additional charge, supply inspection records and when specified perform or repeat under surveillance of the PDC representative selected inspections and tests required by applicable drawings, specifications, and inspection instructions. Evidence of source surveillance must be shown on the shipping document or where specifically authorized by the PDC representative, such evidence will accompany the shipping document.
- C. **Government Source Inspection.** Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly furnish a copy to the government representative who normally services your plant. If there is no government representative then send a copy to the nearest Army, Navy, Air Force, or Defense Supply Agency Inspection office so that appropriate planning for government inspection can be accomplished. In the event the representative or office cannot be located, our purchasing agent should be notified immediately.
- D. **First Article.** The first article(s) produced must be submitted to end inspection and accepted by PDC Quality Assurance prior to further production. Compliance with requirements will be determined by inspection of one part to applicable drawings and specifications, unless more than one part is specified on the purchase order. When submitted to PDC first article items shall be accompanied by the Sellers’ first item inspection report. First articles shall be tagged or otherwise identified to show the tool number and tool serial number when applicable.
- E. **Traveler Document Approval.** PDC contracted assembly work shall be controlled, and tracked by the use of revision controlled lot travelers. The assembly contractor shall prepare a traveler document that details the raw material traceability, processing, and inspection steps from kit verification to delivery of product. Prior to the start of any assembly work, the traveler shall be submitted to Power Device Corporation for approval. Upon completion of assembly, a copy of the completed traveler document is to be delivered with the assembled units.

4. CERTIFICATIONS

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- A. Compliance with purchase order requirements.** Certification that all requirements of the purchase order (including all referenced documents, such as drawings, specifications, quality assurance clauses, and restricted material exclusions) have been complied with. The statement shall identify the parts and or materials certified and shall include all serial numbers for serialized parts, and lot numbers for items identified by lot number and shall contain the applicable PDC purchase order number.
- B. Certification of Printed Wiring Boards & Assemblies.** Certification shall be accompanied by coupons for each board identified by serial number and one micro-section per lot showing the plated thru holes in both planes of the section. All rigid printed wiring boards & assemblies shall be fabricated and certified to the requirements of MIL-P-55110, IPC-6011, IPC-6012, IPC-2221, or IPC-HF-318. All Rigid Flex and Flexible printed wiring boards shall be fabricated and certified to the requirements of MIL-P-50884 or IPC-6013.
- C. Material Conformance.** Certification that the item on the purchase order (identify the item and the PDC purchase order number) were produced from material furnished by PDC or from material for which the Seller has available for examination, specific data or other objective evidence to the effect that the material conforms to all drawing and specification requirements. The applicable drawing(s) and/or specification(s) shall be listed including revision letter(s) or number(s). When PDC furnishes material, the certification must also contain the original material P.O. number referenced on the purchase order. When PDC furnished parts are altered to a new configuration, the certification must cross-reference old part numbers (and serial numbers if applicable) with the new ones designated.
- D. Qualified Products From Manufacturer on Qualified Products List (QPL).** Manufacturers' name and the commercial designation of the product must appear on the parts, affixed by label or nameplate, pre-printed on the wrapping, or on an accompanying certification.
- E. Qualified Products From Supplier NOT on Qualified Products List (QPL).** Certification containing the following statement or equivalent: "Seller hereby certifies that product designation or part number shipped to PDC under (P.O.#) has been qualified by (Manufacturers' Name) under reference test (number) and QPL (number). Manufacturers certification is to be delivered along with Supplier certification.
- F. Qualified Products Incorporated Into A Prime Item.** Certification containing the following statement or equivalent: "Seller hereby certifies that the following subsidiary item (list the QPL products involved, QPL reference numbers, and Manufacturers' name and designation) which are incorporated into the prime item (list prime item part number and purchase order number) are QPL products in accordance with qualification tests." QPL item Manufacturers' certification (or certification from Sellers supplier) is to be delivered with each shipment along with the Sellers certification.
- G. Age Sensitive Materials With Shelf Life Requirements.** Certification that the item(s) on the purchase order (identify the items and the PDC purchase order) are age sensitive. The certificate must identify the material and specify the cure date or date of manufacture, the expiration date, and

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special storage and handling requirements. Where age sensitive materials are incorporated into assemblies, the certificate must identify the assemblies, the PDC purchase order number, the assembly date, and the cure date and information shall also, when applicable, be identifiable with component parts and/or subassemblies within the assembly to which it applies. Material must have 6 months of shelf life available at the time of receipt by PDC, in the case where the shelf life of a material is 6 months or less, then 80% of the useable shelf life shall be available at the time of receipt by PDC.

H. Special Processes. Certification that special processes covered by PDC, Seller, or Government specification, such as, but not limited to, soldering, radiography, welding, heat treating, cleaning, electroplating, anodizing, chemical films, and nondestructive testing were performed in accordance with specification requirements. The certificate shall identify the items processed, the PDC purchase order number, the applicable specifications (including revision letters or numbers) to which the processes conform, the date and the name of the agency that performed the process if other than the Seller.

I. Function Test. Certification that the items on the purchase order, (identify the items on the PDC purchase order) were functionally tested (e.g., mechanical, hydraulic, or electronic operation) to assure conformance to purchase order, drawing, and specification requirements. The certificate must reference applicable specifications (including revision letters or numbers).

J. Packaging. Certification that the items on the purchase order (identify the items and the PDC purchase order) have been packaged in accordance with the packaging requirements stipulated on the purchase order, and/or applicable packaging specifications. The certificate must include the date of packaging, the name of the packaging agency, if other than Seller, and signature of a responsible representative of the packaging agency.

K. DFAR Domestic Specialty Metals.

Certification stating compliance with DFAR 252.225-7014 Preference for Domestic Specialty Metals. This shall be incorporated in the product certification. The certification must bear the signature of a responsible representative of the supplying organization.

L. DRC Conflict Free Minerals.

Certification stating product is “DRC conflict free”. ‘DRC conflict free’ is defined to mean the products that do not contain minerals (tantalum, tin, tungsten, and gold) that directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo or an adjoining country. A list of conflict free smelters is available at the following url:

<http://www.conflictreesmelter.org/cfshome.htm>

DRC conflict free certifications shall be submitted with a completed EICC GeSI Conflict Minerals Reporting Template.

[CFSI Reporting Template](#) or go to URL

<http://www.responsiblemineralsinitiative.org/conflict-minerals-reporting-template/>

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5. RECORDS/REPORTS

- A. Inspection.** Visual and dimensional observations and results during component, in process, and assembly operations must be performed, and a copy delivered with each shipment. Records of these observations shall as a minimum describe the:
 - a. Product inspected and the number of the drawing/specification used.
 - b. Acceptance limits of the observation (Characteristics).
 - c. Number of observations made.
 - d. Method and equipment used for inspection.
 - e. Number of deficiencies detected.
 - f. Identity of individuals performing observations and date.

- B. Test.** Electrical, functional, environmental, mechanical, operative, proof, pressure leak, or other tests in part or whole must be performed, and a copy delivered with each shipment. Records of these tests shall as a minimum describe the:
 - a. Identity of the test with this contract.
 - b. Product tested and the number of the drawing/specification used.
 - c. Acceptance limits of the test parameters.
 - d. Number of units and tests performed.
 - e. Method and equipment (including accuracy and range) used.
 - f. Actual test results. (Variables Data)
 - g. Number and nature of failures (if any) encountered. (Attributes Data)
 - h. Signatures of individuals performing/observing the test(s), and date(s).

- C. Chemical/Physical.** Actual results of chemical/physical tests conducted on materials submitted must be provided. Reports shall identify material specification and revision, tests conducted and results, and material lot utilized. Mil reports are satisfactory, provided they are endorsed by a responsible supplier representative and are positively identifiable to the lot number furnished.

- D. Calibration.** Instrument, gage, tool, or equipment calibration reports must be provided. Report must include:
 - a. Identification of the item calibrated.
 - b. Identification of the calibration standard and procedure employed.
 - c. Degree of non-conformance (percent out of tolerance) of the item when submitted for calibration.
 - d. Results of inspection for damage or condition hazardous to the accuracy integrity of the item.
 - e. Results of calibration.
 - f. Name of the calibrating agency.
 - g. Identity of individuals performing calibration.
 - h. Certifying statement that the standard used for calibration bears evidence of current traceability to the National Institute of Standards and Traceability.
 - i. Date of calibration.
 - j. Signature of a responsible representative of the calibrating agency.

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6. IDENTIFICATION

- A. **Manufacturing Lot or Batch Number.** Seller shall identify all parts and/or materials with a manufacturing lot number or batch number. NOTE: In the absence of a lot control specification required by this purchase order, a lot or batch shall be defined as parts or materials produced by one manufacturer in one unchanged process in accordance with the same drawing and/or specification revision.
- B. **Traceability.** Materials used must be identifiable by lot number, material type, specification and applicable change letter or number, heat number, etc., and traceable to records of acceptance. Parts fabricated by the Seller shall be identified to the lot of materials used. When two or more parts are joined in an assembly, Seller shall prepare an assembly parts list identifying each part in the assembly by part number, lot number, and serial number of material from which fabricated if fabricated by the Seller, or lot control number when the part is a purchased item. For raw materials, this clause applies to identification and traceability of materials to heat or lot number, manufacturing and inspection processes, test results, and records of acceptance. Conformance by Seller's suppliers to traceability requirements of the purchase order, drawing, and/or specifications, shall be the responsibility of the Seller.
- C. **Age Sensitive Material Identification.** Seller shall identify all age sensitive parts and/or materials, i.e., items having characteristics susceptible to quality degradation with age, such as but not limited to all military parts and components (i.e., IC's, diodes, transistors, etc.), all protective coatings, rubber, synthetic rubber, adhesives, resins, plastic-base paints, elastomers, etc. Age sensitive items must be marked in such a manner as to indicate the date at which the critical life was initiated and when the useful life will be expended (i.e. shelf life expiration). Rubber and synthetic rubber shall be less than 4 quarters old when received at PDC. Materials with a useable shelf life must have 6 months of shelf life available at the time of receipt by PDC, in the case where the shelf life of a material is 6 months or less, then 80% of the useable shelf life shall be available at the time of receipt by PDC. Age sensitive materials that require special storage such as Freezer or Refrigerator must indicate storage conditions required on the outermost shipping container.

When initiating shipment of temperature sensitive materials, the tracking number must be emailed to the following Power Device Corporation Inc. personnel so the receipt is anticipated for these special storage items:

Dean.Hulett@powerdevicecorp.com (Dean Hulett, Operations Mgr);

Mark.Baldacchino@powerdevicecorp.com (Mark Baldacchino, Sr. Buyer);

Annette.cochran@powerdevicecorp.com Annette Cochran (Stock Clerk)

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PDC requires date code to be within 2 years of date received at PDC.

D. **PDC requires date code to be within 3 years of date received at PDC.**

E. **PDC requires a single lot date code.**

F. **PDC requires a single manufacturers lot number.**

G. **PDC requires the use of a single die/wafer lot number.**

H. **PDC requires one device per smallest unit container. (For single unit kitting).**

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List of Clauses that require deliverable item(s):

Clause	Title	Deliverables?
1	GENERAL	Yes
2	QUALITY/RELIABILITY SYSTEMS	None
3A	PDC SOURCE INSPECTION	Yes
3B	PDC SOURCE SERVEILLANCE	Yes
3C	GOVERNMENT SOURCE INSPECTION	Yes
3D	FIRST ARTICLE	Yes
3E	TRAVELER DOCUMENT APPROVAL	Yes
4A	COMPLIANCE WITH P.O. REQUIREMENTS	Yes
4B	CERTIFICATION OF PRINTED WIRING BOARDS	Yes
4C	MATERIAL CONFORMANCE	Yes
4D	QUALIFIED PRODUCTS FROM MFR ON QPL	Yes
4E	QUALIFIED PRODUCTS FROM SUPPLIER NOT ON QPL	Yes
4F	QUALIFIED PRODUCTS INCORPORATED INTO A ITEM	Yes
4G	AGE SENSITIVE MTLs. WITH SHELF LIFE REQMTS.	Yes
4H	SPECIAL PROCESSES	Yes
4I	FUNCTION TEST	Yes
4J	PACKAGING	Yes
4K	CERTIFICATION TO DFAR 252.225-7014 Preference for Domestic Specialty Metals	Yes
4L	CERTIFICATION product is "DRC conflict free" along with completed conflict minerals reporting template.	Yes
5A	RECORDS OF INSPECTION	Yes
5B	RECORDS OF TEST	Yes
5C	CHEMICAL PHYSICAL REPORT	Yes
5D	CALIBRATION REPORT	Yes
6A	MANUFACTURING LOT OR BATCH NUMBER I.D.	No, Verify Only
6B	TRACEABILITY	No, Verify Only
6C	AGE SENSITIVE MATERIAL I.D.	No, Verify Only
6D	DATE CODE WITHIN 2 YEARS OF RECEIPT	No, Verify Only
6E	DATE CODE WITHIN 3 YEARS OF RECEIPT	No, Verify Only
6F	SINGLE LOT/DATE CODE	No, Verify Only
6G	SINGLE MANUFACTURERS LOT#	No, Verify Only
6H	SINGLE DIE/WAFER LOT#	No, Verify Only
6I	ONE DEVICE PER SMALLEST UNIT CONTAINER	No, Verify Only

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Commodity Codes & Application of Quality Clauses

Reference Document 1005390

TABLE II

COMMODITY CODES = QUALITY CLAUSES TABLE

PRODUCT TYPE COMMODITY CODES- PRODUCT SUPPLIERS

COMMODITY CODE	COMMODITY DESCRIPTION	QUALITY CLAUSES TO REFERENCE
PKG	PACKAGES	1, 2A, 4A, 4H, 5C, 6A, SEIPKG
LID	LIDS	1, 2A, 4A, 4H, 5C, 6A, SEIRPHS-L
DIE	DIE & WAFERS	1, 2A, 4A, 6A, 6H, SEIDIE-S
PRE	PREFORMS (DIE ATTACH & SEAL)	1, 2A, 4A, 5C, 6A, 6C
D/M	DIE ATTACH MATERIAL, COATINGS, INKS, SOLDER	1, 2A, 4A, 4G, 5C, 6A, 6C
WIRE-BOND	WIRE FOR BONDING MICROCIRCUITS	1, 2A, 4A, 5C, 6A, 6C
PAS-HIREL	PASSIVE COMPONENTS (HI-REL) [Resistors, Capacitors, Transistors, Diodes, Transformers, Inductors, Substrates]	1, 2A, 4A, 4I, 5A, 5B, 6A, 6B, 6D, 6G Element Evaluation per MIL-PRF-38534 Class K. (Qualified product certified to a standard military drawing does not require delivery of element evaluation data, but it must be available)
PAS	PASSIVE COMPONENTS (NON HI-REL)	1, 2A, 4A, 4I, 6A, 6B, 6G
IC	INTEGRATED CIRCUITS (OTHER THAN NED) [Oscillators included]	1, 2A, 4A, 4D, 4E, 4I, 5A, 5B, 6A, 6B, 6C, 6D, 6F, 6G, 6H, 6I
NED	NUCLEAR EVENT DETECTORS (From TET only)	1, 2A, 4A, 4I, 6A, 6B, 6C, 262A0011
CTG	COATINGS	1, 2A, 4A, 4G, 6A, 6C
HDW	HARDWARE	1, 2A, 4A, 4H, 6A
PWB	PRINTED WIRE BOARD	1, 2A, 3D, 4A, 4B, 5C, 6A
CON	CONNECTORS	1, 2A, 4A, 6A
CHEM	CHEMICALS (FOR COATINGS USE CTG, FOR DIE ATTACH EPOXY USE D/M)	1, 2A, 4A, 4G, 5A, 5B, 5C, 6A, 6B, 6C
PAK-BD	PACKAGING FOR SINGLE BOARD COMPUTERS	1, 2A, 3A, 3D, 4A, 4C, 4J, 6A, 6C, 6I

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TABLE II Cont'd

COMMODITY CODES = QUALITY CLAUSES TABLE

SERVICE TYPE COMMODITY CODES- SERVICE SUPPLIERS

COAT	CONFORMAL COATING	1, 2A, 3D, 3E, 4A, 4H, 5A, 5C, 6B
CAL	CALIBRATION	1, 2A, 4A, 5D
ASSY	FLIGHT HARDWARE ASSEMBLY	1, 2A, 3D, 3E, 4A, 4H, 5A, 6B
SLDR	LEAD FORMING, SOLDER DIPPING, COLLUMN ATTACH, OR REMOVAL OF SOLDER	1, 2A, 4A, 4H, 5C, 6B
TEST	ENVIRONMENTAL OR ELECTRICAL TESTING PER MIL-STD TEST METHODS	1, 2A, 4A, 4H, 5B
LSRMRK	LASER MARKING	1, 2A, 4A
WFR SAW	WAFER SAW, THINNING, OR "DICEING"	1, 2A, 4A, MIL-STD-883 Method 2010, Class S.
DIS	DISTRIBUTOR ONLY	1, 2A, 4E, 4F, WITH SPECIFIC COMMODITY CODES FOR DISTRIBUTED COMMODITY ADDED ALSO.
STO	STORAGE OF DOCUMENTS, DIGITAL DATA	1, 2A
BRAZE	BRAZING SERVICES (LIDS)	1, 2A, 4H, 6A, 6B
RAD	RADIATION SOURCES (TID, SEE, SEU, SEL)	1, 2A, 3E
TRAIN	TRAINING SERVICES	1, 2A
AUD/INSP	3rd PARTY AUDIT OR INSPECTION SERVICES	1, 2A

QUALITY CLAUSE CODES ARE DEFINED IN DOCUMENT# 1006957 POWER DEVICE CORPORATION QUALITY CLAUSES

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REVISION HISTORY

The table below contains detailed revision history for this document.

Rev	Date	ECO#	Revision Description	Originator
1	N/A	N/A	Initial Release	N/A
2	N/A	N/A	Add clause 3E traveler document approval for contracted assembly.	N/A
3	N/A	N/A	Add Unit Packaging quality clause 6I, and add the requirement for static shielding bags on ESDS items.	N/A
4	N/A	N/A	Remove obsolete standard 9002 and add AS9100 in Clause section 2.	N/A
5	N/A	N/A	Add DFARS restrictions, and option to require certification of DFARS compliance.	N/A
6	N/A	N/A	Add to General clause prohibited material item bb) Use of pink-poly bags, bubble-wrap, film, or foam for packaging. Also noted under packaging for delivery section.	N/A
7	N/A	N/A	Add to General clause requirement for suppliers using electronic parts in deliverables to implement a counterfeit parts control program per AS5553. Add requirement to comply with all laws including but not limited to export laws.	N/A
8	N/A	N/A	Added 4L Certification of DRC Conflict Free Minerals, and Added item (cc) DRC Conflict Minerals to section 1 under prohibited materials and practices.	N/A
9	N/A	N/A	Added Compliance to REACH requirement to the GENERAL section. Added to the requirements of code 6C to indicate storage conditions for items that require freezer or refrigerator storage on the outermost shipping container, and the requirement to send the tracking number via email to Dean, Jewel, and Jose when initiating shipments of special storage items.	N/A
10	N/A	N/A	Changed Contact information, added URL to Clause "L", replaced Maxwell with PDC references, updated template.	N/A
11	N/A	N/A	Altered Change notification section, adding clauses (a to e)	N/A
12	N/A	N/A	Amended Identification /Traceability section, Added Section 1, ADDITIONAL QUALITY ASSURANCE CLAUSES.	N/A
13	4/29/2022	N/A	Included right of access clause in section 1 Included Supplier awareness Amended contact info in clause C	EJACOBSEN
14	5/19/23	N/A	Add Table II, Add Intro Paragraph 2, Replace DDC with PDC, formatting to new template, remove EAR, proprietary statement, remove contract manufacturer	EJACOBSEN

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