



AEROSPACE STANDARD

AS6081®**REV. A**Issued 2012-11
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Superseding AS6081

(R) Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts:
Avoidance, Detection, Mitigation, and Disposition -
Independent Distribution

RATIONALE

This standard is being updated to address the evolving risk of counterfeit electrical, electronic, and electromechanical (EEE) parts entering the aerospace supply chain, posing performance, reliability, and safety risks.

FOREWORD

This standard establishes requirements and practices to mitigate the risk of buying, receiving, and selling suspect counterfeit or counterfeit EEE parts. This document standardizes requirements, practices, and methods related to supplier management, procurement, inspection, and test/evaluation, as well as response strategies when suspect counterfeit or counterfeit EEE parts are discovered. Implementation of the requirements of this document provides a vehicle for supply chain members to collaborate and minimize risk.

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1. SCOPE

1.1 Purpose

This SAE Aerospace Standard (AS) standardizes practices to identify reliable sources to procure electrical, electronic, and electromechanical (EEE) parts, assess and mitigate the risk of distributing suspect counterfeit or counterfeit EEE parts, control suspect counterfeit or counterfeit EEE parts, and report incidents of suspect counterfeit and counterfeit EEE parts.

1.2 Application

This standard sets forth practices and requirements for use by Independent Distributors or Brokers of EEE parts or any entity performing open market transactions. This document does not apply to system integrators, their original equipment manufacturers (OEMs), or authorized (franchised) distributors and aftermarket manufacturers when supplying EEE parts obtained directly from the original component manufacturer (OCM) or the OCM authorized (franchised) distributor for whom they are authorized. The requirements of this standard are intended to be applied and flowed down through the supply chain to all Independent Distributors, or Brokers of EEE parts or any entity performing open market transactions that procure EEE parts and/or assemblies, regardless of type, size, and product provided. This standard is not intended to stand alone, supersede, or cancel requirements established by the contract with the customer. This standard can be used by internal and external parties, including Certification Bodies (CBs) accredited by an International Accreditation Forum (IAF) Multilateral Recognition Arrangements (MLA) Signatory Accreditation Body (AB) (<http://www.iaf.nu/>), to meet customer, regulatory, or the organization's requirements to mitigate the risk of conducting commerce in suspect counterfeit or counterfeit EEE parts. This standard does not "qualify" or "certify" the EEE parts.

The types of sources of supply mentioned within this document include OCM, OEM, authorized (franchised) distributor, independent distributor, broker, stocking distributor, and aftermarket manufacturer.

Information marked "NOTE" or "NOTES" is for guidance in understanding or clarifying the associated text.

A related standard, AS5553, provides guidelines and requirements for counterfeit EEE part risk mitigation that are applicable for use by OEMs, and their subcontractors who manufacture assemblies. Organizations may flow down to independent distribution applicable requirements from AS5553, AS6081, and/or other requirements.

1.2.1 Appendices

Unless otherwise specified, the content of the appendices is provided as guidance and can be invoked in whole or in part, by the policies, requirements, or processes of the organization. If the organization or the customer has mandated compliance with the appendices, in whole or in part, the extent to which the appendices apply shall be considered requirements and included, or referenced, in the organization's Counterfeit EEE Parts Control Plan (see 3.4).

If the organization or the customer has not mandated compliance with the appendices, in whole or in part, then nonconformance to the appendices is not considered a nonconformity to AS6081.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. For references with dates, only the edition cited applies. For references without dates, the latest edition of the referenced document applies. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA and Canada), <http://www.sae.org/>.

AIR6273	Terms, Definitions, and Acronyms, Counterfeit Materiel or Electrical, Electronic, and Electromechanical Parts
ARP6178	Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors
ARP6328	Guideline for Development of Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Systems
AS5553	Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition
AS6171	Test Methods Standard; General Requirements, Suspect/Counterfeit Electrical, Electronic, and Electromechanical Parts
AS6174	Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel
AS6462	Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition Verification Criteria
AS6496	Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition - Authorized/Franchised Distribution
AS9003	Inspection and Test Quality Systems, Requirements for Aviation, Space, and Defense Organizations
AS9100	Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations
AS9120	Quality Management Systems - Requirements for Aviation, Space, and Defense Distributors

2.1.2 ANSI Accredited Publications

Copies of these documents are available online at <https://webstore.ansi.org/>.

ANSI/ASQC E4	Quality Management Systems for Environmental Information and Technology Programs
ANSI/ESD S20.20	Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)
ANSI Z540.3	Requirements for the Calibration of Measuring and Test Equipment

2.1.3 Commercial Publications

2.1.3.1 ASD-STAN Publications

Available from ASD-STAN Secretariat, Rue Montoyer, 10/5, B-1000 Brussels, Belgium, Tel: +32 2 775 81 26, www.asd-stan.org.

ASD-STAN EN 4179 Aerospace and Defense Industries Association of Europe - Qualification and approval of personnel for non-destructive testing

2.1.3.2 ASME Publications

Available from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, NJ 07007-2900, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 973-882-1170 (outside North America), www.asme.org.

ASME NQA-1 Quality Assurance Requirements for Nuclear Facility Applications (NQA-1 - 2015)

2.1.3.3 ASNT Publications

Available from American Society for Nondestructive Testing, P.O. Box 28518, 1711 Arlingate Lane, Columbus, OH 43228-0518, Tel: 800-222-2768 (inside U.S. and Canada) or 614-274-6003 (outside USA), www.asnt.org.

ANSI/ASNT CP-189 American Society for Nondestructive Testing Standard for Qualification and Certification of Nondestructive Testing Personnel

ASNT SNT-TC-1A American Society for Nondestructive Testing - Recommended Practice for Personnel Qualification and Certification of Nondestructive Testing

2.1.3.4 CTI Publications

Available from CTI, 211 Homewood Dr., Huntsville, AL, 35801 Tel: 256-651-1551 (U.S./Canada), <https://www.cti-us.com/index.htm>.

CCAP-101 Counterfeit Components Avoidance Program, Certification for Independent Distributors

2.1.3.5 IDEA Publications

Available from IDEA, 2250 Double Creek Dr #6474, Round Rock, TX 78683-0061, Tel: 714-670-0200 (U.S./Canada), <https://www.idofea.org/>.

IDEA-QMS-9090 Quality Management System Standard for Independent Distributors of Electronics Association Members

IDEA-STD-1010 Acceptability of Electronic Components Distributed in the Open Market

IDEA-TRN-1000 Avoidance and Visual Indicators of Counterfeit Parts for Management

IDEA-TRN-2000 Inspection for Visual Indicators of Counterfeit Parts

2.1.3.6 IPC Publications

Available from IPC, 3000 Lakeside Drive, 309 S, Bannockburn, IL 60015, Tel: 847-615-7100, www.ipc.org.

IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies

IPC/JEDEC J-STD-033 Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices

2.1.3.7 JEDEC Publications

Available from JEDEC, 3103 North 10th Street, Suite 240-S, Arlington, VA 22201-2107, <https://www.jedec.org/>.

JEDEC JESD31 General Requirements for Distributors of Commercial and Military Semiconductor Devices

2.1.4 Government Publications

These courses are available online at <https://www.dau.edu/>.

LOG 0320 Defense Acquisition University Course - Preventing Counterfeit Electronic Parts from Entering the DoD Supply System

LOG 0620 Defense Acquisition University Course - Counterfeit Prevention Awareness

Copies of these documents are available online at <https://www.dla.mil>.

QSLD Qualified Suppliers List of Distributors

QTSL Qualified Testing Suppliers List

2.1.5 ISO Publications

Available from International Organization for Standardization, ISO/IEC Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO 9000 Quality Management Systems - Fundamentals and Vocabulary

ISO 9001 Quality Management Systems - Requirements

ISO 9712 Non-destructive testing - Qualification and certification of NDT personnel

ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories

2.2 Terms and Definitions

Other than those terms listed below, the definitions of terms used in this standard are in accordance with AIR6273.

NOTE: In the event of conflicting definitions, the definitions within AS6081 take precedence.

2.2.1 ELECTRICAL, ELECTRONIC, AND ELECTROMECHANICAL (EEE) PART(S)

Components designed and built to perform specific functions using electric power and/or an electric or electromagnetic signal to demonstrate functionality, which are not subject to disassembly without destruction or impairment of design use.

NOTES:

- a. Examples of electromagnetic signals are radio waves, microwaves, infrared waves, visible light, ultraviolet waves, X-rays, and gamma rays.
- b. Electromechanical parts have electrical inputs with mechanical outputs, or mechanical inputs with electrical outputs, or combinations of each.

A partial list of EEE parts can include the following:

- a. Electrical parts: Resistors, capacitors, inductors, wire, cables, transformers, and connectors.
- b. Electronic parts: Active devices, such as monolithic microcircuits, hybrid microcircuits, diodes, and transistors.
- c. Electromechanical parts: Motors, synchros, servos, and some relays which may appear as assemblies but are considered parts.

2.2.2 SUSPECT COUNTERFEIT EEE PART

A part for which there is objective and credible evidence indicating that it is likely a counterfeit.

2.2.3 COUNTERFEIT MATERIEL OR EEE PART

- a. An unauthorized (a) copy, (b) imitation, (c) substitute, or (d) modified materiel or EEE part, which is knowingly, recklessly, or negligently misrepresented as a specified genuine item from an authorized manufacturer, or
- b. A previously used materiel or EEE part which has been modified and is knowingly, recklessly, or negligently misrepresented as new without disclosure to the customer that it has been previously used.

NOTE: This definition may differ from civil or criminal laws that address the acts of counterfeiting or fraud and is not intended to make a legal determination. Used materiel or EEE parts sold as new that have not been modified are not counterfeit, according to some civil and criminal statutes.

2.3 Related Terms and Definitions

AUTHORIZED AFTERMARKET MANUFACTURER: A manufacturer that meets one or more of the following criteria:

The manufacturer is authorized by the OCM to produce and sell replacement EEE parts, usually due to an OCM decision to discontinue production of an EEE part. EEE parts supplied are produced from materials that have been:

- a. transferred from the OCM to the aftermarket manufacturer or
- b. produced by the aftermarket manufacturer using OCM tooling and/or intellectual property (IP).

AUTHORIZED SOURCE: Original component manufacturers and OCM-authorized sources of supply for an EEE part (i.e., franchised distributors, authorized distributors), and authorized aftermarket manufacturers.

CERTIFICATE OF CONFORMANCE (CoC): A document signed by a responsible party for the supplier that formally declares that applicable requirements have been met.

NOTE: The document may include information such as manufacturer, distributor, quantity, lot and/or date code, inspection date, specifications, etc. Certificates of Conformance can vary. It may certify conformance to a MIL-SPEC or the manufacturers' specification, but not certify conformance to a specific customer's order. This definition does not meet the requirements of FAR 52.246-15.

DISTRIBUTOR-APPROVED SUPPLIER: A supplier that has been formally assessed, is determined to use acceptable counterfeit EEE parts risk mitigation and quality management processes and is entered on the procuring entity's register of approved suppliers for that item.

NOTE: Formal assessment can be performed by audits, surveys, document review, etc.

DISTRIBUTION AGREEMENT: A specific, written contract between the manufacturer and the distributor that authorizes the distributor to resell the manufacturer's parts. Contractual terms include, but are not limited to, distribution region, distribution products or lines, and warranty flow down from the manufacturer. These agreements often include failure analysis support, return privileges and product change notifications.

DOCUMENTED INFORMATION: Records/documents that provide evidence of conformity with requirements specified herein.

GIDEP (GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM): A cooperative activity between U.S. and Canadian government and industry participants seeking to reduce or eliminate expenditures of resources by sharing technical information essential during research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.

NOTE: GIDEP is used by the governments and industry to report non-conforming and counterfeit parts or material.

HOMOGENEOUS LOT: A group of parts that:

- a. are received in a single shipment (whether in single or multiple packages),
- b. are marked or otherwise identified with identical lot, batch, run, and identification information (e.g., dates codes, lot codes),
- c. are identical in appearance to the unaided eye (parts and packaging),
- d. appear to have been subjected to the same handling, packaging, and/or storage conditions, and
- e. have maintained their physical placement relative to each other (i.e., have never been separated based on evidence such as source, packaging, labeling).

MASTER DISTRIBUTOR: A master distributor, also known as a wholesale distributor, is a distributor whose primary business is to sell to other distributors. A master distributor may or may not be an authorized distributor.

OPEN MARKET: The trading market that buys or consigns excess inventories of EEE parts and subsequently utilizes these inventories to supply needs of an end-user.

NOTE: The open market may include the purchase and sale of EEE parts where the full supply chain traceability of such EEE parts is unknown.

ORGANIZATION: In the context of this document, organization refers to any entity that supplies EEE parts to the customer.

PACKAGING (COMPONENT): Component packaging refers to the manner in which EEE parts are packaged in preparation for use by electronic assemblers. The determination of packaging types is determined by product sensitivities such as moisture, physical (lead pitch, co-planarity), electrostatic discharge (ESD), as well as the method (manually, or by use of automated equipment) to be used to place EEE parts on the printed circuit board.

NOTE: There are four main types of packaging: bulk, trays, tubes, and tape and reel.

PART, ACTIVE: An electronic component that contains semiconductor junctions. Examples of active parts include monolithic microcircuits (ICs), hybrid microcircuits, and semiconductor devices such as diodes, silicon-controlled rectifiers, and transistors.

PART, PASSIVE: An electrical and/or electromechanical component that does not contain semiconductor junctions. Examples of passive electrical parts include resistors, capacitors, inductors, transformers, wire and cables, and connectors. Examples of passive electromechanical parts include motors, synchros, servos, and some relays.

REFURBISHED: Used parts or material restored to a “like new” appearance (e.g., cleaned, polished, plated, painted, or renovated).

NOTE: Ideally, but not guaranteed, refurbished parts or material are identified as such and tested for functionality.

STOCKING DISTRIBUTOR: A distributor that stocks inventory.

USED (REFURBISHED OR PULLED): Product that has been electrically charged and subsequently pulled or removed from a socket or other electronic application, excluding electrical testing for acceptance.

NOTE: Used products may be received in non-standard packaging, and may contain mixed lots, date codes, be from different facilities, etc. Parts may have physical defects such as scratches, slightly bent leads, test dots, faded markings, chemical residue, or other signs of use, but the leads should be intact. Used product may be sold with a limited warranty, and programmable parts may still contain partial or complete programming which could impact the part's functionality. Used parts marketed as refurbished are declared as such.

3. REQUIREMENTS

Unless otherwise specified by the customer, all requirements of Section 3 shall apply.

3.1 Relationship of the Quality Management System to AS6081 Requirements

The organization shall implement and comply with an industry recognized higher-level quality standard or quality management system in conjunction with the requirements specified herein.

NOTE: Using a higher-level quality standard in conjunction with AS6081, should minimize the risk of purchasing or supplying a suspect counterfeit or counterfeit EEE part. Examples of higher-level quality management system standards are ISO 9001, IDEA-QMS-9090, ANSI/ASQC E4, ASME NQA-1, AS9100, AS9120, AS9003, and product- or process-specific quality standards such as AS5553.

3.2 Suspect Counterfeit and Counterfeit EEE Parts Mitigation Policy

The organization shall establish a documented policy to prevent the purchase, acceptance, and distribution of suspect counterfeit or counterfeit EEE parts in conformance with the risk mitigation requirements specified herein. The organization's senior management shall ensure that its policy is communicated, understood, implemented, and maintained at all levels of the organization and made accessible to the customer upon request.

3.3 Control of Documented Information

The organization shall establish documented processes to define the controls needed for the identification, storage, protection, retrieval, retention, and disposition of documented information. Documented information shall remain legible, readily identifiable, and retrievable. Unless otherwise specified in the contractual requirements, the retention period for all documented information shall be a minimum of 10 years.

3.4 Counterfeit EEE Parts Control Plan

The organization shall develop and implement a counterfeit EEE parts control plan that documents its processes used for risk mitigation, disposition, and reporting of suspect counterfeit or counterfeit EEE parts. The control plan may be provided as a standalone plan against this standard or otherwise may be integrated into the organization's existing quality management system. The control plan shall include the requirements of 3.2 through 3.4.14.

The control plan shall be maintained and updated based on evolving counterfeiting techniques.

3.4.1 Request for Quotation Review

The organization shall disclose test or inspection methods that were or will be performed by the organization prior to any customer test or inspection requirements, on each homogeneous lot being offered. If no test or inspections are performed prior to any customer testing or inspection requirements, this disclosure is also required with each homogeneous lot being offered. When requested, the organization shall provide detailed test and inspection methodology documentation, including results, sample size criteria, acceptance or rejection criteria, and how the testing was accomplished.

The organization shall not perform pre-screening (see 3.4.6).

The organization's review of the request for quotation addresses the following:

- a. The organization shall determine if the customer requires additional testing and inspection for EEE part conformity and acceptance for each homogeneous lot being offered. The organization shall coordinate with the customer to determine if such test and inspection results are needed prior to or subsequent to the delivery of the parts being offered (see 3.4.6).
- b. The organization shall notify the customer in writing if the customer requirements cannot be satisfied.

3.4.2 Contract Review, Agreement, and Execution

The organization shall review the customer requirements:

- a. The organization shall notify the customer in writing if customer commitments cannot be satisfied.
- b. The organization shall comply with the following unless otherwise specified by or agreed to by the customer:

Provide a product guarantee that:

1. the EEE parts are unused and not suspect counterfeit or
 2. if parts are found to be suspect counterfeit or used, then the organization will replace parts or refund the original cost of the product for a minimum of one year post-delivery, for parts related to sales to OEMs or their sub-contractors.
- c. The organization shall review the customer requirements for inspection and testing for the detection of suspect counterfeit or counterfeit EEE parts.

3.4.3 Supplier Approval and Source Selection

The organization shall:

- a. Have documented processes to assess potential suppliers to mitigate the risk of receiving suspect counterfeit or counterfeit EEE parts. The organization shall identify and mitigate any risks found during the assessment.

See 3.4.6, Appendix A, and ARP6178 for additional guidance.

- b. Develop, maintain, and use a register of suppliers that includes approval status. The process for creating the register shall include the scope and criteria for the approval and removal of suppliers. Distributor-approved suppliers shall be reviewed prior to procurement, if a year has elapsed since their last transaction, and their status updated if warranted changes have occurred. These reviews shall also be triggered by risk-based events likely to negatively affect counterfeit risk. Such events could include material business size changes, ownership changes, mergers, and change in Commercial and Government Entity (CAGE) Code. Triggers may also include data from internal and external reporting centers (such as System for Award Management (SAM), ERAI, GIDEP, and UK Anti-Counterfeiting Forum).
- c. Maintain objective evidence when the supplier is an authorized source.

3.4.4 Purchase Order Requirements

The organization shall flow down the following requirements to their suppliers, via an appropriate contractual mechanism.

- a. Controls for suspect counterfeit or counterfeit EEE part avoidance.
- b. Requirements specified by the organization's customers.
- c. Contractual language prohibiting the pre-screening of homogenous lots to remove non-conforming, defective, suspect counterfeit, or counterfeit EEE parts prior to performing inspection and/or testing.

NOTE: Examples of contractual requirements and contract clauses are provided in Appendix B.

3.4.5 Supply Chain Traceability

The organization shall have documented processes that:

- a. Require retention for 10 years minimum of all available objective evidence and records pertaining to supply chain traceability and testing (e.g., packing lists, invoices, manufacturer's Certificate of Conformance (CoC), Certificate of Conformance and Supply Chain Traceability (CoCT), test results, returned material documentation).
- b. Ensure objective evidence provides traceability to the authorized source or the mitigated risk documentation.

NOTE: Authorized source records may enable traceability/tracking to the manufacturer (e.g., OCM/OEM).

3.4.6 Verification of Purchased Product

The organization shall provide for verification of purchased product in accordance with customer requirements and the organization's quality management system. Prescreening of lots to remove defective parts prior to sample selection and testing shall not be permitted. If the verification identifies suspect or confirmed counterfeit EEE parts, the organization shall contain the parts in accordance with 3.4.8. The organization shall report such parts per 3.4.9.

When required by the customer, the organization shall provide detailed test and inspection methodology documentation including results, sample size, acceptance/rejection criteria, disposition, and which recognized industry standard test or inspection methods were used.

3.4.7 Material Control

The organization shall have documented processes for controlling EEE products that include the following:

- a. The organization shall not alter, obliterate, or redact the following information from the OCM's labeling: logo, name, lot/date code, and part number (including revision or die info), unless specified by the customer contract. The organization shall not instruct another supplier to complete this activity on their behalf, unless specified by the customer contract. Adhesive labels may cover the OCM marking provided that the OCM marking is clearly legible after label removal. Where applicable, retain OCM package labeling and part marking with any repackaged parts.
- b. Require product which does not meet the manufacturers' specifications to be dispositioned in accordance with 3.4.8.
- c. Preserve the product during internal processing and delivery to the intended destination in order to maintain conformity to requirements.
- d. Handle ESD-sensitive devices in accordance with a documented ESD control program per ANSI/ESD S20.20, including control of humidity in accordance with J-STD-001.
- e. Handle moisture sensitive components in accordance with IPC/JEDECJ-STD-033 or customer requirements.

- f. The organization shall implement a customer return process which segregates EEE parts until they are verified as new and unused. The customer return process shall provide for verification that parts returned by the customer to the organization were purchased directly from the organization. Verification shall require validation of the returned parts against the organization's traceability records, including the date/lot code of parts returned, when available.

If there is any evidence that the aforementioned requirements were not met, the parts shall be considered non-conforming pending disposition.

3.4.8 Control of Suspect Counterfeit and Counterfeit EEE Parts/Assemblies

Suspect counterfeit and counterfeit EEE parts/assemblies are considered non-conforming and shall be controlled in accordance with the organization's Quality Management System (QMS) requirements and the requirements specified herein.

The organization shall:

- a. Segregate suspect or confirmed counterfeit parts from all other parts or products until disposition and prevent such parts from re-entry into the supply chain. Quarantine/segregation shall consist of physical barriers and controlled access.
- b. Not disposition suspect counterfeit or counterfeit EEE parts for use-as-is.
- c. Not remove suspect counterfeit or counterfeit EEE parts from quarantine except for independent verification testing in accordance with 3.4.6 or for final disposition.
- d. Retain suspect counterfeit or counterfeit EEE parts in accordance with customer, statutory, and regulatory requirements.
- e. Destroy parts once retention requirements have been met or surrender parts to requesting Authorities Having Jurisdiction.
- f. Maintain the records pertaining to suspect counterfeit or confirmed counterfeit EEE parts in accordance with 3.3.

3.4.9 Reporting

The organization's documented processes shall include the reporting of any EEE part(s) or any assemblies containing EEE part(s) that have been determined to be suspect counterfeit or counterfeit to the required distribution noted in 3.4.9.1 in accordance with customer, statutory, and regulatory requirements.

3.4.9.1 Reporting Distribution

The organization shall report incidents of suspect counterfeit or counterfeit EEE part(s) to the following distribution listed below as a minimum:

- a. Internal management.
- b. Legal counsel (when applicable at the organization).
- c. All customers that the suspect counterfeit or counterfeit EEE part(s) may have been provided to within the last 10 years, if the parts are the same part number and procured from the same supplier or are the same lot or date code as previously delivered parts.

NOTE: The 10-year time period is intended to capture any previous transactions unless the organization can bind the incident to a specified time period.

- d. Government contracting officer, or their designee, when the contract was placed under terms of the government (e.g., government funding; design agency is the government).

- e. Data reporting agencies as mandated by government and/or legal contractual requirements.
- f. If there is no mandated reporting agency, report to an appropriate national body—such as the National Intellectual Property Rights Coordination Center (IPR Center) for the United States—and report to one or more of the following: GIDEP, UK Anti-Counterfeiting Forum, ERAI.

3.4.9.2 Type of Information on Suspect Counterfeit or Counterfeit EEE Parts to be Reported by the Organization

The organization shall report the following information or ensure that the information has been reported by other entities (e.g., supplier, test lab) when applicable and available:

- a. Part number(s) (including the national stock number (NSN) or national item identification number (NIIN), where applicable).
- b. Date code(s), and lot code(s), as marked on the parts or on the part packaging.
- c. Problem description.
- d. The date that suspect counterfeit or counterfeit anomalies were found.
- e. The date that the parts were determined to be suspect counterfeit or counterfeit EEE parts.
- f. The date the part(s) were acquired and/or shipped to customers, if previously shipped.
- g. A copy of the inspection and test report that documented the part(s) as being suspect counterfeit or counterfeit EEE parts.

NOTE: Security (e.g., International Traffic in Arms Regulation (ITAR), Export Administration Regulations (EAR)) or other restrictions (e.g., proprietary information) may apply to distribution of the inspection and test report. ITAR & EAR restrictions are typically an issue with GIDEP reporting.

- h. Actions taken and planned based on the reported incident (e.g., disposition, supplier disqualified, all affected customers notified).

3.4.10 Organization Actions in Response to Data Reporting

The organization shall have a documented process for the review of alerts or reports concerning suspect counterfeit or counterfeit EEE part(s) or supplier(s) of such parts issued from data reporting centers used by the organization, including any data reporting center mandated for use by government or legal contractual reporting requirements. The purpose of this review is to avoid the purchase or use of suspect counterfeit or counterfeit EEE part(s).

If the organization's screening process identifies that the organization is impacted by the alert or report (e.g., item part number, supplier of the item), the organization shall perform the following:

- a. Adjudicate the incident(s) using the processes as specified in the organization's Counterfeit EEE Parts Control Plan.
- b. Report the incident(s) to the appropriate reporting center as applicable.

3.4.11 Personnel Training

The organization shall train relevant personnel in the awareness, avoidance, mitigation, disposition of suspect counterfeit or counterfeit EEE parts, and in the technology used for detection, if relevant to their organizational role and/or function.

NOTE: Relevant personnel may include those involved with customer interface, management, program and project management, procurement, quality assurance, inspection/testing, detection, receiving, manufacturing, and engineering activities. Examples of training programs and resources are included in Appendix C.

3.4.12 Internal Audit

The Organization's internal audit or continuous improvement program shall address compliance to:

a. AS6081

NOTE: A corresponding checklist for AS6081 may be found within AS6301 (see Section 4).

b. The Organization's Counterfeit EEE Parts Control Plan

3.4.13 Product Impoundment and Financial Responsibility

The organization's flow-down process shall include provisions to address product impoundment, testing, and/or associated financial responsibilities unless otherwise superseded by customer agreement. Some sample provisions to assist in resolving issues related to product impoundment, testing, and/or associated financial responsibilities are set forth in B.1.7.

3.4.14 Internal Awareness

The organization shall establish processes to obtain current counterfeiting information and trends annually at a minimum. This shall include the detection, avoidance, and mitigation techniques contained in appropriate industry standards.

The organization shall use results from current counterfeiting information as opportunities for lessons learned, problem resolutions, and the benchmarking of best practices on counterfeiting to improve internal processes.

NOTE: Examples of keeping informed may also include attendance/participation in technical conferences; reading current information on counterfeiting, technical journal articles on counterfeiting, data reporting center reports and alerts; and incorporating industry standards in counterfeit mitigation processes.

4. COMPLIANCE VERIFICATION CRITERIA FOR AS6081

AS6301 is a guidance document that can be used by the certification body and others to establish compliance with AS6081.

5. NOTES

5.1 Revision Indicator

A change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of this document. An (R) symbol to the left of the document title indicates a complete revision of the document, including technical revisions. Change bars and (R) are not used in original publications, nor in documents that contain editorial changes only.

APPENDIX A - SUPPLIER APPROVAL AND SOURCE SELECTION FOR COUNTERFEIT AVOIDANCE

See 1.2.1 regarding applicability of this appendix.

- A.1 Supplier approval and source selection criteria should consider the following factors when such information is available:
- a. Historical experience with procuring product from the supplier.
 - b. Unresolved documented problems noted by external sources (such as SAM, ERAI, GIDEP, IDEA, customer referrals, or equivalent).
 - c. Trading history, including references, from known reputable sources and/or independent distributors.
 - d. Demonstrated adherence and certification to standards such as AS9003, AS9100, ISO 9001, AS9120, ANSI/ESD-S20.20, ANSI Z540.3, IDEA-STD-1010, JEDEC JESD31, IPC/JEDEC J-STD-033, ISO/IEC 17025 (test facilities), or equivalent.
 - e. Demonstrated adherence to applicable provisions of this SAE Aerospace Standard (AS).
 - f. Results of audits/surveys.
 - g. Acceptable documented purchasing and product acceptance processes for verifying the authenticity of parts supplied.
 - h. Use of qualified laboratory testing facilities (third party or in-house), such as those accredited to ISO/IEC 17025.
 - i. Use of quality inspectors that have been trained on the product verification techniques that they perform and are formally certified based on demonstrated competency.
 - j. Acceptable terms for product warranty, returns, and liability; financial means to support contractual guarantees; and product liability insurance as well as third party professional insurance.
 - k. Factors indicating greater potential for supply of suspect counterfeit or counterfeit EEE parts, such as:
 1. High risk geographic location of supplier and/or product.
 2. Multiple company names.
 3. Multiple company names with multiple CAGE Codes, located at the same address.
 4. Inaccurate or misleading representation of product stock and availability.
 5. Inaccurate or misleading representation of facilities or in-house capabilities.
 6. Inaccurate or misleading representation of industry qualifications and/or affiliation.
- A.2 When authorized sources provide services which are not authorized by an OCM (e.g., independent distribution), it is recommended the organization clearly identifies the role in the transaction (by line item exception when they are not authorized) that the supplier provides (i.e., authorized source, independent distributor).
- A.3 Supplier selection should be a documented process to assess potential suppliers to determine the risk of receiving suspect counterfeit or counterfeit EEE parts. The assessment method should include a method of scoring the supplier's responses similar to Table A1 and should incorporate weighted criteria or a supplier ranking process in accordance with ARP6178 or an equivalent system for supplier selection utilizing weighted supplier quality data. ARP6178 may be used as a replacement, or additional assessment criterion from ARP6178 may be added at the discretion of the organization. Documentation should also include a process for assessment, corrective action, or removal of distributor-approved suppliers.

Table A1 - Example supplier assessment

Requirement	Significance	Score (0 to 3)
Check of business address	3	0 Residence or “public” mailbox 3 Commercial facility
Check of financial information	4	0 Negative financial data (unpaid bills, lawsuits, bankruptcy) 1 No data found 3 Positive financial data
Check quality management system certifications	2	0 None, or only “compliant” 1 ISO 9001 certified or equivalent 2 AS9120 certified or equivalent 3 ISO 9001 and AS9120 certified or equivalent
Check industry trade portal separate (unrelated) comments in the last 3 years, quality-related only	6	0 4 or more negative comments 1 1 to 3 negative comments 3 No negative comments
Check presence on third-party counterfeit risk mitigation qualified listings (e.g., QSLD/QTSL, CCAP-101, AS6081 certified or compliant)*	2	0 No presence on qualified listings 3 Presence on qualified listings
Check usage of data from reporting entities of suspect counterfeit or counterfeit EEE parts (such as SAM, GIDEP, ERAI, UK Anti-Counterfeiting Forum)*	3	0 1 Participates in one reporting entity 2 Participates in multiple reporting entities
Check documented issues with external sources (last 3 years)	7	0 Reported two or more times for suspect counterfeit or counterfeit EEE parts, not all resolved 1 Reported once for suspect counterfeit or counterfeit EEE parts, not resolved 2 Reported for suspect counterfeit or counterfeit EEE parts, all issues resolved 3 No reports for suspect counterfeit or counterfeit EEE parts
Check presence on government debarred or excluded parties' listings	8	0 On a debarment or excluded parties listing 3 Not on debarment or excluded parties listing
Check warranty and product liability information (for scores 1 thru 3, drop one point if no product liability insurance)	5	0 7 day return policy, no product liability insurance 1 30 day return policy, product liability insurance 2 60 day return policy, product liability insurance 3 1 year return policy, product liability insurance
Check organization's past history with supplier	10	0 Past issues with suspect counterfeit or counterfeit EEE parts 1 Past quality issue (not suspect counterfeit or counterfeit) 2 No past history 3 Past history, no negative issues
Penalties at organization's discretion (reduction in score), Document reasons for concern (e.g., multiple company names, false information supplied, owner previously owned a problem company, etc.	-10	0 No concerns with supplier 1 Low-level concerns 2 Medium concerns 3 Serious Concerns

* Verification of memberships or certifications should be verified with the issuing entity.

In Table A1, the supplier rating for each criterion is the significance number (fixed) multiplied by the score (from 0 to 3). A perfect score for Table A1 is 147 points. Any supplier scoring less than 127 should not be approved for use by the organization unless documentation by the supplier or organization justifies increasing an individual score(s) sufficiently to bring the total score to 127 or higher. For example, the score for the “check industry trade portal comments” requirement might be adjusted from 1 to 3 if the supplier can demonstrate that negative comments are the result of unfounded or petty comments, thereby adding 18 points.

Table A2 - Example supplier classification

Supplier Classification	Supplier Type	Classification Criteria	Maintenance Criteria
Authorized	OCM, Authorized Source	Supplier is authorized or the OCM.	Authorization is still current.
Preferred	Authorized Reseller, Master Distributor, Broker, Broker Distributor, Independent Distributor, OEM, Stocking Distributor	Last 12-month period without any suspect counterfeit or counterfeit EEE parts escapes, non-conformances, quality escape issues, or major contract issues. The rolling 12-month period should contain at least ten transactions.	Authorization for authorized reseller only is still current. Check whether master distributor only is an authorized distributor. Maintain annual 95% successful conformance rate with minimum ten annual transactions and any issues resolved by acceptable corrective actions, if necessary.
Acceptable	Authorized Reseller, Master Distributor, Broker, Broker Distributor, Independent Distributor, OEM, Stocking Distributor	Last 12-month period without any suspect counterfeit or counterfeit EEE parts escapes, non-conformances, quality escape issues or major contract issues. The rolling 12-month period should contain at least five transactions.	Authorization for authorized reseller only is still current. Check whether master distributor only is an authorized distributor. Maintain annual 90% successful conformance rate with minimum five annual transactions and any issues resolved by acceptable corrective actions, if necessary.
Probationary	Authorized Reseller, Master Distributor, Broker, Broker Distributor, Independent Distributor, OEM, Stocking Distributor	New supplier or supplier with less than five transactions over last 12-month period with minor non-conformances, quality escape issues, or contract issues resolved by acceptable corrective actions and without any suspect counterfeit or counterfeit EEE part incidences.	Authorization for authorized reseller only is still current. Check whether master distributor only is an authorized distributor.
Prohibited (Note 1)	Authorized Reseller, Master Distributor, Broker, Broker Distributor, Independent Distributor, OEM, Stocking Distributor	Currently denied, suspended, or debarred by a government agency or at least one transaction over the last 10-year period that resulted in an unresolved suspect counterfeit or counterfeit EEE part incident or major nonconformance, quality issue or contract issue.	Authorization for authorized reseller only is still current. Check whether master distributor only is an authorized distributor.

Note 1: It is not good practice to purchase parts from a prohibited supplier.

Table A3 - Debarred company listings

U.S.A.	
System for Award Management (SAM)	The System for Award Management (SAM) contains the electronic roster of debarred companies excluded from federal procurement and non-procurement programs throughout the U.S. government (unless otherwise noted) and from receiving federal contracts or certain subcontracts and from certain types of federal financial and nonfinancial assistance and benefits. The SAM system combines data from the Central Contractor Registration, Federal Register, Online Representations and Certification Applications, and the Excluded Parties List System. Government initiated debarment actions may be identified on GIDEP Agency Action Notice (AAN) documents. NOTE: The Excluded Parties List System (EPLS) includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the nonprocurement common rule, or otherwise declared ineligible from receiving federal contracts, certain subcontracts, and certain federal assistance and benefits. The EPLS website officially retired November 22, 2012. EPLS and other systems have been migrated to the SAM. SAM is a free website that consolidates the capabilities found in CCR/FedReg, ORCA, and EPLS. Registering with SAM will allow access to the full functionality of the system. See https://sam.gov/SAM/pages/public/index.jsf for additional information.
Bureau of Industry and Security (BIS) U.S. Department of Commerce List of Parties of Concern	In the event a company, entity, or person on one of the following lists appears to match a potential party in an export transaction, additional due diligence is recommended before proceeding. Depending on which list the match was found, a match indicates: (1) a strict export prohibition, (2) a specific license requirement, or (3) the presence of a "red flag." Prior to taking any further actions, recommend users consult the requirements of the specific list on which the company, entity, or person is identified by reviewing the webpage of the agency responsible for the list. See http://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern. The following lists can be found on this website: - Consolidated Screening List (CSL): The Consolidated Screening List is a searchable and downloadable file that consolidates export screening lists of the Departments of Commerce, State, and the Treasury into one spreadsheet to assist in screening potential parties to regulated transactions. If the potential match is from the consolidated list, please follow the detailed instructions on the Consolidated List homepage to determine what list the potential match is from and under what government agency's jurisdiction. - Denied Persons List: A list of individuals and entities that have been denied export privileges. Any dealings with a party on this list that would violate the terms of its denial order are prohibited. Refer to Section 764.3(a)(2) of the EAR. - Entity List: The Entity List identifies foreign parties that are prohibited from receiving some or all items subject to the EAR unless the exporter secures a license. These parties present a greater risk of diversion to weapons of mass destruction (WMD) programs, terrorism, or other activities contrary to U.S. national security and/or foreign policy interests. By publicly listing such parties, the Entity List is an important tool to prevent unauthorized trade in items subject to the EAR. - Unverified List: A list of parties whose bona fides BIS has been unable to verify. No license exceptions may be used for exports, reexports, or transfers (in-country) to unverified parties. A statement must be obtained from such parties prior to shipping items not subject to a license requirement. Refer to Section 744.15 of the EAR.

APPENDIX B - "ORGANIZATION AS CUSTOMER" CONTRACT REQUIREMENTS

See 1.2.1 regarding applicability of this appendix. Legal counsel should be consulted prior to invoking in whole or in part any of the proposed contract requirements set forth in this appendix.

NOTE: Purchase and sales contract language typically uses the terms "seller" and "buyer." To avoid confusion, those terms were not used in this document. In this section of the document, the "organization" should be interpreted to be the "customer (buyer)."

B.1 CONTRACT/PURCHASE ORDER CONTRACT CLAUSES

The clauses provided in B.1.1, or substantially equivalent language, should be included in all contracts/purchase orders for EEE parts entered into by the organization. They are intended to supplement—not duplicate or replace—requirements contained in other quality standards invoked upon the supplier (e.g., ISO 9001, AS9120) or purchase contracts with the organization.

B.1.1 Guarantee of EEE Part(s)

- a. <SUPPLIER> shall endeavor to first purchase parts directly from original component manufacturers (OCMs), OCM authorized (franchised) distributors, or authorized aftermarket manufacturers or from suppliers who obtain such parts exclusively from the OCM or their authorized sources with OCM traceability. <SUPPLIER> shall ensure that only new and verified non-counterfeit EEE parts are delivered to <ORGANIZATION>.
- b. Authorized (franchised) distributor <SUPPLIER> covenants, warrants, and represents that it has effective contractual agreements in place with each manufacturer whose EEE part(s) it is procuring to sell to <ORGANIZATION>.

B.1.2 Authorized (Franchised) Distributor <SUPPLIER> shall:

- a. Only ship EEE parts to <ORGANIZATION> that have been procured directly from the manufacturer.
- b. Not ship EEE parts to <ORGANIZATION> that have been procured from any other source without prior written consent from <ORGANIZATION>.
- c. Be considered an unapproved independent distributor for EEE parts procured from other sources.

Failure to obtain <ORGANIZATION'S> prior written approval constitutes a material breach under the terms of this agreement.

Authorized (franchised) distributor <SUPPLIER> will fully indemnify <ORGANIZATION> from any and all claims, losses, and damages that result from said breach. <ORGANIZATION> reserves the right to reject any and all requests for approval and require additional verification and testing of EEE parts."

B.1.3 Supply Chain Traceability

<SUPPLIER> shall maintain a method of item traceability that ensures tracking of the supply chain back to the manufacturer of all electrical, electronic, and electromechanical (EEE) parts being delivered per this order. This traceability method shall clearly identify the name and location of all supply chain intermediaries from the manufacturer to the direct source of the EEE part for <ORGANIZATION> and shall include the manufacturer's batch identification for the item(s) such as date codes, lot codes, serializations, or other batch identifications. This traceability requirement applies to new purchases of material, material in inventory and material transferred from <SUPPLIER'S> other business units. If this traceability is unavailable or cannot be provided, <ORGANIZATION> shall approve this exception in writing at the time of purchase order.

B.1.4 Test and Inspection Requirements

<SUPPLIER> shall establish and implement test and inspection activities necessary to assure the verification of purchased EEE part.

<SUPPLIER> shall comply with the inspection and test requirements of AS6171, to the extent specified by the <ORGANIZATION>.

<SUPPLIER> shall document and provide upon request all available tests and inspections results which were performed to assess and mitigate the risk of distributing suspect counterfeit or counterfeit EEE parts. Accept/reject criteria and sampling criteria shall be clearly defined or approved by <ORGANIZATION>.

Tests and inspections shall be performed by persons that have been trained in the EEE part verification techniques that they perform and are formally certified based on demonstrated competency. <SUPPLIER> shall maintain records of training and methods used to demonstrate competency. <ORGANIZATION> shall inquire as to <SUPPLIER'S> inspection qualifications prior to placing an order.

B.1.5 Certificate of Conformance (CoC)

<SUPPLIER> shall approve, retain, and provide copies of electrical, electronic, and electromechanical (EEE) Manufacturer Certificates of Conformance (CoC) when available. In no case shall the supplier alter the manufacturer's certificate.

Where manufacturer CoCs are not available, <ORGANIZATION> shall require <SUPPLIER> to provide the following signed and dated CoC:

<SUPPLIER> hereby attests that the parts provided under this purchase order are unused, unaltered and authentic and have not been salvaged, reclaimed, refurbished or pulled from any electronic application, or previously rejected for any reason. This statement is based on rigorous supplier selection practices, supplier assurance practices, and tests and inspections of the specific parts supplied that are designed to prevent the supply of suspect counterfeit or counterfeit EEE parts.

<SUPPLIER'S> certificates shall state that the EEE parts have been handled in accordance with the requirements of this document and include as a minimum the following:

- a. Manufacturer's name
- b. Part number(s)
- c. <ORGANIZATION'S> name and address
- d. Name and address of the customer
- e. Quantity of the parts in the shipment
- f. Lot date code, as applicable
- g. Latest re-inspection date, if applicable
- h. Certification that the shipment is part of the shipment covered by the manufacturer's documentation (when manufacturer's documentation is available/provided)
- i. Signature and date of transaction; an authorized signatory assigned by a corporate officer with responsibility for the product quality and reliability or their documented designee