SAE Aerospace
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AEROSPACE STANDARD

SAE AS6462

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AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Verification Criteria

RATIONALE

This verification criterion was created in response to the increasing use of AS5553 (Aerospace Standard; Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition) by industry due to the increasing volume and potential risk of procuring and using counterfeit electronic parts. As the industry has adopted AS5553 and claim that processes and procedures are in compliance with the Counterfeit Electronic Parts Standard, a standard set of conformity assessment compliance requirements is established to validate compliance and justify issuance of certification to AS5553.

FOREWORD

To assure compliance to AS5553 requirements, a set of standard assessment criteria must be utilized to evaluate and establish uniform certification. This document standardizes compliance criteria for AS5553 requirements.

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http://www.sae.org/technical/standards/AS6462

1. SCOPE

1.1 Purpose

This set of criteria is to be utilized by accredited Certification Bodies (CBs) to establish compliance, and grant certification to AS5553, Aerospace Standard; Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition.

1.2 Application

This document is intended for use during certification audits to the requirements of AS5553. It is recommended to be used by all contracting organizations that procure electronics parts, whether such parts are procured directly or integrated into electronic assemblies or equipment as guidance for evaluating compliance to AS5553 or in preparation for a certification audit or internal evaluation.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. 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.

The requirements of this document are intended to supplement the requirements of a higher level quality standard (e.g., AS9100) and other quality management system documents. They are not intended to stand alone, supersede, or cancel requirements found in other quality management system documents, requirements imposed by contracting authorities, or applicable laws and regulations unless an authorized exemption/variance has been obtained.

2.1 SAE Publications

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

AS5553 Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition

2.2 ANSI Publications

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ANSI\EIA-STD-4899A-2009

2.3 Commercial Publications

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

2.4 ISO Publications

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ISO 9000 Quality Management Systems - Fundamentals and Vocabulary

2.5 Other Publications

IEC TS62239 Process management for avionics – Preparation of an electronic components management plan

3. TERMS AND DEFINITIONS

For the purposes of this document, the terms and definitions stated in ISO 9000, AS5553 and the following shall apply:

3.1 Related Definitions

Subject Matter Expert (SME): The Subject Matter Expert (SME) is an expert in the area of counterfeit parts and is a key member of the audit team. (Note: An SME can also be the Lead Assessor, if qualified.)

4. REQUIREMENTS

Table 1, Verification Table, shall be used by the Certification Body to establish compliance to AS5553. The table contains the AS5553 requirement clause, criteria for compliance, record of compliance, and a column for notes.

5. NOTES

5.1 A change bar (l) 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.

TABLE 1 - VERIFICATION CRITERIA

SAE AS5553 Clause	Requirement	Comply? Yes Or No	Criteria For Compliance	Record of Compliance	Notes
4.1	Counterfeit Electronic Parts Control Plan - The organization shall develop and implement a counterfeit electronic parts control plan that documents its processes used for risk mitigation, disposition, and reporting of counterfeit parts. The control plan shall include the processes described in 4.1.1 through 4.1.7.		1. The plan is a Released Document with configuration control. This plan can be a standalone plan or a plan that points to existing released documents/processes. 2. Sections within document for Parts Availability, Purchasing, Purchasing Information, Verification of purchased product, In Process Investigation, Material Control, and Reporting.	Record document title, number(s), release date, and revision. Record SME rationale for acceptability and comments. Record other documented evidence/ artifact.	

SAE AS5553 Clause	Requirement	Comply? Yes Or No	Criteria For Compliance	Record of Compliance	Notes
4.1.1	Parts Availability - The processes shall maximize availability of authentic, originally designed and/or qualified parts throughout the product's life cycle, including management of parts obsolescence. Information and guidance for ensuring parts availability is provided in Appendix A, Parts Availability.		These requirements must: 1. Verify Counterfeit Electronic Parts Control Plan (CEPCP) reference to new or existing obsolescence management processes. 2. Verify CEPCP reference to new or existing part management (selection) requirements. 3. SME documents and concurs that all processes are technically acceptable. NOTE: Certification to ANSI/EIA-STD-4899A-2009 and/or IEC TS62239 is evidence of compliance to AS5553, paragraph 4.1.1.	Record document title, number(s), release date, and revision. Record SME rationale for acceptability and comments. Record other documented evidence/ artifact.	
4.1.2	Purchasing (process not organization) - The processes shall: a. Assess potential sources of supply (including electronic parts, assembly, and equipment suppliers) to determine the risk of receiving ounterfeit parts. NOTE: Assessment actions may include surveys, audits, review of product alerts (e.g., GIDEP, ERAI), and review of supplier quality data to determine past performance. b. Maintain a register of approved suppliers, including the scope of the approval, to minimize the risk of counterfeit parts supply. NOTE: Information and guidelines for source assessment and approval/selection are provided in Appendix B, Purchasing Process.		Documented and controlled process to assess risk of receiving counterfeit parts from all suppliers of electronic components and assemblies/hardware containing electronic components. Document controlled list of approved suppliers including Original Component Manufacturers (OCM) and OCM franchised distributors and the scope of their approval.	Record document title, number(s), release date, and revision. Record SME rationale for acceptability and comments. Record document title, number, release date, and revision of approved supplier list. Record other documented evidence/ artifact, including application specific risk assessments.	

SAE AS5553 Clause	Requirement	Comply? Yes Or No	Criteria For Compliance	Record of Compliance	Notes
4.1.2 (cont'd.)	c. Specify a preference to procure directly from OCMs or authorized suppliers who are on the approved supplier register.		Documented preference to procure from OCMs/OCM franchised distributors. When not purchasing from the OCM or OCM approved distributor documented/ controlled processes (purchasing, receiving and inventory control) to assess and mitigate the risk of receiving a Counterfeit Part (CFP) for each procurement and application. The highest risk application shall be the basis for the risk assessment.	Documented/controlled CFP detection, mitigation and report processes are implemented by suppliers.	
	d. Assure that approved/ongoing sources of supply are maintaining effective processes for mitigating the risks of supplying counterfeit electronic parts. NOTE: Assurance actions may include surveys, audits, review of product alerts, and review of supplier quality data to determine past performance.		Documented/controlled processes for supplier and as appropriate supply chain monitoring and objective evidence assessment. Objective evidence that all applicable CEPCP requirements have been flowed down throughout the supply chain.	Supplier evidence via physical audit assessment and or test data assessment. Record SME rationale for acceptability and comments.	
	e. Assess and mitigate risks of procuring counterfeit parts from sources other than OCMs or authorized suppliers. This shall be accomplished and documented for every application when it is necessary to procure from other than the OCM or an authorized supplier.		When not purchasing from the OCM or OCM approved distributor, controlled processes must be documented to assess application specific risk. Must have a documented risk mitigation plan appropriate to the identified risk. The highest risk application shall be the basis for the risk assessment. Evidence of risk mitigation plan executed.	Documented/controlled Application Risk mitigation plan or Assessment. Re-assess for new applications, and evaluate previous risk assessment and how is it noted or flagged. SME verifies process and records an example of a risk assessment for evidence. Record SME rationale for acceptability and comments.	

SAE AS5553 Clause	Requirement	Comply? Yes Or No	Criteria For Compliance	Record of Compliance	Notes
4.1.2 (cont'd.)	f. Specify supply chain traceability to the OCM or aftermarket manufacturer that identifies the name and location of all of the supply chain intermediaries from the part manufacturer to the direct source of the product for the seller. If this traceability is unavailable or the documentation is suspected of being falsified, a documented risk assessment is required. Guidance and information regarding supply chain traceability are provided in Appendix C, Supply Chain Traceability.		Ensure PO specifies traceability requirements needed by the organization. Ensure PO includes communication, notification, and customer approval requirements if traceability cannot be demonstrated for each specified part. Where Customer Approval requirements are noted, ensure organization has processes that incorporates the approval authorization with the part risk mitigation processes of 4.1.2.e. The documented processes shall require the retention of records providing supply chain traceability wherever such traceability exists. The records shall provide traceability to the OCM or Aftermarket Manufacturer that identifies the name and location of all of the supply chain intermediaries for all procurement lots and the date of all intermediate purchases, from the part manufacturer to the direct source of the product for the seller. Supply chain traceability records shall be provided with each shipment and shall be retained for a minimum of five (5) years or maintained in accordance with customer statutory and regulatory requirements. If this traceability is incomplete or unavailable, customer approval in advance is required. This traceability requirement applies to new purchases of material, material in inventory, and material transferred from other businesses within the organization. If the organization (acting as supplier) is not the original manufacturer of the Goods or Services, the organization shall also provide with the delivery of each consignment copies of the original manufacturer's certificate of conformity/compliance together with the test results, etc., where applicable.	Documented PO note or clause requiring supply chain traceability to the OCM. If unavailable or suspect, then appropriate notification is provided to the procuring agent. Risk assessment is initiated and recorded. Documented process for approval authorization required for risk assessment and applied risk mitigation process.	

SAE AS5553 Clause	Requirement	Comply? Yes Or No	Criteria For Compliance	Record of Compliance	Notes
4.1.2 (cont'd.)	g. Specify flow down of applicable requirements of this document to applicable contractors and their sub-contractors. In the event that one or more supply chain intermediaries do not have a counterfeit part control plan compliant to this document, a risk analysis shall be required for every application of the part.		Evidence of applicable requirements is flowed down to subcontractor or sub-tier component integrators/ supplier(s)/contract manufacturer. Evidence of risk analysis, if one or more supply chain intermediaries do not have a counterfeit part control plan compliant to this document. SME documents and concurs that all processes are technically acceptable.	Record document title, number(s), release date, and revision. Record SME rationale for acceptability and comments. Record other documented evidence/ artifact.	
4.1.3	Purchasing Information - The documented process shall specify contract/ purchase order quality requirements to minimize the risk of being provided counterfeit parts. NOTE: Examples of procurement quality requirements and clauses are provided in Appendix D.		Evidence of supplier's procurement and quality processes to insure CEPCP requirements are levelled onto and throughout the supply chain, e.g., Purchase Order clauses, contract and or PO requirements. SME documents and concurs that all processes are technically acceptable.	Record document title, number(s), release date, and revision. Record SME rationale for acceptability and comments. Record other documented evidence/ artifact.	