



AEROSPACE RECOMMENDED PRACTICE

ARP6178™

REV. A

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Superseding ARP6178

(R) Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts:
Tools for Risk Assessment of Other than an Authorized Source
(e.g., Independent Distributors)

RATIONALE

ARP6178 was published in 2011. Industry knowledge, terminology, and suspect counterfeit and counterfeit avoidance processes have evolved since then; this document was updated accordingly.

FOREWORD

To assure customer satisfaction, aerospace industry organizations must produce, and continually improve, safe and reliable products that meet or exceed customer and regulatory authority requirements. The globalization of the aerospace industry and the resulting diversity of regional/national requirements and expectations has complicated this objective. End-product manufacturers face the challenge of assuring the quality and integration of product purchased from suppliers throughout the world and at all levels within the supply chain. Aerospace suppliers and processors face the challenge of delivering product to multiple customers having varying quality expectations and requirements.

This SAE Aerospace Recommended Practice (ARP) identifies and provides guidance for assessing suppliers of electrical, electronic, and electromechanical (EEE) parts other than authorized sources or exclusive suppliers as defined in AS5553 (e.g., independent distributors) to avoid procuring suspect counterfeit and counterfeit parts. Note that an authorized source may offer some products outside of authorized distribution and these transactions would be considered from other than an authorized source. This document was developed from best practices identified by procuring organizations and was developed with the intent of supplementing the information and requirements of AS5553 and AS6081.

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1. SCOPE

1.1 Purpose and Applicability

This SAE Aerospace Recommended Practice (ARP) is a tool that organizations may use to evaluate a non-authorized supplier's processes for the prevention, detection, containment, adjudication, and reporting of suspect counterfeit and counterfeit EEE parts. See 3.1.1 and 3.1.2, which reference the use of AS6081 when performing pre-visit self-assessment and on-site assessment of non-authorized suppliers.

This ARP is applicable for all organizations that procure EEE parts from suppliers other than authorized sources (e.g., independent distributors).

2. REFERENCES

2.1 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.

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), www.sae.org.

AIR6273	Terms, Definitions, and Acronyms, Counterfeit Materiel or Electrical, Electronic, and Electromechanical Parts
AS5553	Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts: Avoidance, Detection, Mitigation, and Disposition
AS6081	Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts: Avoidance, Detection, Mitigation, and Disposition - Independent Distribution
AS6171	Test Methods Standard; General Requirements, Suspect/Counterfeit, Electrical, Electronic, and Electromechanical Parts

2.1.2 IDEA Publications

Available from The Independent Distributors of Electronics Association (IDEA), Tel: +1 (714) 670-0200, <https://idofea.org/>.

IDEA-STD-1010	Acceptability of Electronic Components Distributed in the Open Market
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2.1.3 U.S. Government Publications

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

MIL-PRF-38534	Performance Specification: Hybrid Microcircuits, General Specification for
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2.2 Terms and Definitions

For the purposes of this document, the terms and definitions listed in AIR6273, AS6081, and the following apply. In the event of a conflict of definitions, the definitions herein shall take precedence.

2.2.1 AFTERMARKET MANUFACTURER

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

- a. The manufacturer is authorized by the original component manufacturer (OCM) to produce and sell replacement parts, usually due to an OCM decision to discontinue production of a part. Parts supplied are produced from materials that have been:
 1. Transferred from the OCM to the aftermarket manufacturer, or
 2. Produced by the aftermarket manufacturer using OCM tooling and intellectual property (IP).
- b. The manufacturer produces parts using semiconductor dice or wafers, manufactured by and traceable to an OCM, that have been properly stored until use and are subsequently assembled, tested, and qualified using processes that meet technical specifications without violating the OCM's intellectual property rights (IPR), patents, or copyrights.
- c. The manufacturer produces parts through emulation, reverse-engineering, or redesign, that match the OCM's specifications and satisfy customer needs without violating the OCM's IPR, patents, or copyrights.

NOTE: An aftermarket manufacturer typically labels or otherwise identifies its parts to ensure that the "as shipped" aftermarket manufactured part is not mistaken for the part made by the OCM.

2.2.2 AUTHORIZED (FRANCHISED) DISTRIBUTION

Transactions conducted by an organization distributing product within the terms of a contractual agreement with the original manufacturer.

NOTE: Contractual agreement terms may include, but are not limited to, distribution region, distribution products or lines, and warranty flow down from the original manufacturer. Franchised distribution is considered synonymous with authorized distribution.

2.2.3 AUTHORIZED (FRANCHISED) DISTRIBUTOR

An organization that performs authorized distribution. A franchised distributor is considered synonymous with an authorized distributor.

NOTE: Approved and authorized are considered different terms and are not interchangeable.

2.2.4 AUTHORIZED SOURCE

The OCM as defined below, aftermarket manufacturers as defined above, and OCM-authorized sources of supply for a transaction (i.e., authorized distribution).

NOTE: Some authorized sources will provide other services which are not authorized by an OCM (e.g., independent distribution). In such situations, the source is not considered an authorized source.

2.2.5 COUNTERFEIT EEE PART

1. An unauthorized (a) copy, (b) imitation, (c) substitute, or (d) modified electrical, electronic, or electromechanical (EEE) part, which is knowingly, recklessly, or negligently misrepresented as a specified genuine item from an authorized manufacturer; or
2. A previously used 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 EEE parts sold as new that have not been modified are not counterfeit, according to some civil and criminal statutes.

Examples of suspect counterfeit and counterfeit EEE parts are provided in AS6171 and IDEA-STD-1010.

2.2.6 INDEPENDENT DISTRIBUTION

A transaction performed outside of a contractual agreement with the OCM, original equipment manufacturer (OEM), authorized aftermarket manufacturer, or a source authorized by the OCM/OEM to produce or alter an item.

2.2.7 INDEPENDENT DISTRIBUTOR

An entity performing independent distribution.

2.2.8 ORIGINAL COMPONENT MANUFACTURER (OCM)

An entity that designs and/or engineers a part, with design authority for that part and/or the process used to produce the part.

NOTES:

1. The part and/or its packaging are typically identified with the OCM's trademark, logo, and/or name.
2. OCMs may contract out manufacturing and/or distribution of their product.
3. More than one OCM may produce a part to a common specification.
4. Organizations are not OCMs if they acquire parts for which they are not the design authority and relabel or re-package them as their own.
5. Manufacturers of hybrid microcircuits per MIL-PRF-38534 or equivalent are considered OCMs.

2.2.9 PART(S)

One or more pieces joined together, which are not normally subject to disassembly without destruction or impairment of intended design use.

2.2.10 SUPPLIER

An entity where parts and materiel can be acquired.

2.2.11 SUSPECT COUNTERFEIT EEE PART

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