

TECHNICAL SPECIFICATION



**Process management for avionics – Counterfeit prevention –
Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic
components**

(<https://standards.iteh.ai>)

Document Preview

IEC TS 62668-1:2014

<https://standards.iteh.ai/Catalogue/standards/iec/76c8be0f-7073-4d6d-9dd2-df90bc951e48/iec-ts-62668-1-2014>



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

IEC TS 62668-1:2014

<https://standards.iteh.ai/Catalogue/standards/iec/7688be0f-7073-4d6d-9dd2-df90bc951e48/iec-ts-62668-1-2014>

TECHNICAL SPECIFICATION



**Process management for avionics – Counterfeit prevention –
Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic
components**

Document Preview
<https://standards.iteh.ai>

IEC TS 62668-1:2014

<https://standards.iteh.ai/Catalogue/standards/iec/76c8be0f-7073-4d6d-9dd2-df90bc951e48/iec-ts-62668-1-2014>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE **XB**

ICS 03.100.50; 31.020; 49.060

ISBN 978-2-8322-1679-8

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	6
1 Scope.....	8
2 Normative references	8
3 Terms, definitions and abbreviations	9
3.1 Terms and definitions.....	9
3.2 Abbreviations.....	12
4 Technical requirements	14
4.1 General.....	14
4.2 Minimum avionics OEM requirements	15
4.3 Intellectual property	17
4.3.1 General	17
4.3.2 Definition of intellectual property.....	18
4.4 Counterfeit consideration	18
4.4.1 General	18
4.4.2 Legal definition of counterfeit.....	18
4.4.3 Fraudulent components	19
4.4.4 How to establish traceability	19
4.4.5 Reasons for the loss of component traceability	19
4.5 Why is counterfeit a problem?.....	20
4.5.1 General	20
4.5.2 General worldwide activities combating counterfeit issues	20
4.5.3 Cultural differences	21
4.5.4 Counterfeiting activities and avionics equipment.....	21
4.5.5 Electronic components direct action groups.....	23
4.6 Recycled components.....	24
4.6.1 General	24
4.6.2 Why does the avionics industry not use recycled components?.....	24
4.6.3 When do recycled components become suspect and potentially fraudulent?	24
4.7 Original component manufacturer (OCM) anti-counterfeit guidelines	25
4.7.1 General	25
4.7.2 Chinese Reliable Electronic Component Supplier (RECS) audit scheme	25
4.7.3 Original component manufacturer (OCM) ISO 9001 and AS/EN/JISQ 9100 Third Party Certification	25
4.7.4 Original component manufacturer (OCM) trademarks	25
4.7.5 Original component manufacturer (OCM) IP control	25
4.7.6 Original component manufacturer (OCM) physical part marking and packaging marking.....	26
4.7.7 The Semiconductor Industries Association Anti Counterfeit Task Force (ACTF)	26
4.7.8 USA Trusted Foundry Program	27
4.7.9 USA Trusted IC Supplier Accreditation Program	27
4.7.10 Physical unclonable function (PUF)	27
4.7.11 Original Component Manufacturer (OCM) best practice	27
4.8 Distributor minimum accreditations	28
4.9 Distributor AS/EN/JISQ 9120 Third Party Certification.....	28
4.10 Franchised distributor network	28

4.10.1	General	28
4.10.2	Control stock through tracking schemes	29
4.10.3	Control scrap	29
4.10.4	RECS	29
4.11	Non- franchised distributor anti-counterfeit guidelines	29
4.11.1	General	29
4.11.2	CCAP-101 certified program for independent distributor	30
4.11.3	SAE AS6081	30
4.11.4	OEM managed non-franchised distributors	30
4.11.5	Brokers	30
4.12	Avionics OEM anti-counterfeit guidelines when procuring components	30
4.12.1	General	30
4.12.2	Buy from approved sources	31
4.12.3	Traceable components	31
4.12.4	Certificates of conformance	31
4.12.5	Plan and buy sufficient quantities	32
4.12.6	Use of non- franchised distributors	32
4.12.7	Brokers	32
4.12.8	Contact the original manufacturer	32
4.12.9	Obsolete components and franchised aftermarket sources	32
4.12.10	IEC/TS 62239-1 approved alternatives	33
4.12.11	Product redesign	33
4.12.12	Non traceable components	33
4.12.13	OEM anti-counterfeit plans including SAE AS5553 and SAE AS6174	33
4.13	OEM anti-counterfeit guidelines for their products	36
4.13.1	IP control	36
4.13.2	Tamper-proofing the OEM design	36
4.13.3	Tamper-proof labels	36
4.13.4	Use of ASICS and FPGAs with IP protection features	36
4.13.5	Control the final OEM product marking	37
4.13.6	Control OEM scrap	37
4.13.7	OEM trademarks and logos	37
4.13.8	Control delivery of OEM products and spares and their useful life	37
4.13.9	Repairs to OEM products	37
4.14	Counterfeit, fraud and component recycling reporting	38
4.14.1	General	38
4.14.2	USA FAA suspected unapproved parts (SUP) program	38
4.14.3	EASA	38
4.14.4	UK counterfeit reporting	38
4.14.5	EU counterfeit reporting	38
4.14.6	UKEA anti-counterfeiting forum	38
Annex A	(informative) Useful contacts	40
A.1	World Intellectual Property Organization (WIPO)	40
A.1.1	General	40
A.1.2	What is WIPO?	40
A.1.3	WIPO Intellectual Property Services	40
A.1.4	WIPO global network on Intellectual Property (IP) Academies	42
A.2	Anti-Counterfeiting Trade Agreement (ACTA)	44
A.2.1	ACTA	44

A.2.2	Global Anti-Counterfeiting Network (GACG)	44
A.3	World Semiconductor Council (WSC)	44
A.4	SEMI	45
A.5	Electronics Authorized Directory	46
A.6	UK	46
A.6.1	The UK intellectual property office	46
A.6.2	Alliance for IP	47
A.6.3	UK Trading Standards Institute	47
A.6.4	UK HM Revenue and Customs	47
A.6.5	ESCO Anti-counterfeiting Forum (formerly UKEA Anti-Counterfeiting Forum)	48
A.6.6	Electronic Component Supplier Network (ESCN)	48
A.6.7	UK Ministry of Defence	48
A.7	Europe	48
A.7.1	Europa Summaries of EU Legislation	48
A.7.2	Europol, the European Law Enforcement Agency	49
A.7.3	European Patent Office	49
A.7.4	Europe at OHIM	49
A.7.5	European Aviation Safety Agency (EASA)	50
A.7.6	IECQ audit schemes	50
A.7.7	BEAMA	50
A.8	USA	50
A.8.1	United States Patent and Trademark Office	50
A.8.2	The International Trade Administration, U.S. Department of Commerce	51
A.8.3	USA Embassy in China information	51
A.8.4	International Intellectual Property Alliance	52
A.8.5	The FAA	53
A.8.6	FAA Engine Approval	53
A.8.7	FAA Aviation Safety Hotline office	53
A.8.8	Trusted Access Program Office (TAPO)	53
A.8.9	Defense Microelectronics Activity (DMEA)	53
A.8.10	Independent Distributors of Electronic Association (IDEA)	54
A.8.11	ECIA formerly National Electronic Distributors Association (NEDA)	54
A.8.12	Components Technology Institute Inc (CTI)	55
A.8.13	Defense Logistics Agency (DLA)	55
A.8.14	DFAR progress	55
A.8.15	IAQG	56
A.9	China	56
A.9.1	State Intellectual Property office of the P.R.C.	56
A.9.2	Chinese Patent and Trademark Office	56
A.9.3	Chinese Electronic Purchasing Association (CEPA) and the RECS scheme	56
A.9.4	China Quality Management Association for Electronics Industry (CQAE)	57
A.9.5	Chinalawinfo.Co Ltd., for Law info China	57
A.9.6	China Anti-counterfeit Technology Association (CATA)	58
A.10	Japan – Japanese Patent Office	58
A.11	Physical unclonable function	58
A.12	The Hardware Intrinsic Security (HIS) initiative	59
A.13	Examples of tag provider	59

A.14	Examples of Tamperproof design companies	60
A.15	Examples of FPGA Die serialisation	60
A.16	Examples of NOVRAM manufacturers	60
A.17	SAE G-19	60
A.18	iNEMI	62
Annex B	(informative) Examples of aftermarket sources	63
B.1	Examples of franchised aftermarket sources	63
B.2	Examples of sources of franchised die which can be packaged	63
B.3	Examples of third party custom packaging houses which provide aftermarket solutions	63
B.4	Examples of emulated aftermarket providers	63
Annex C	(informative) Typical example of a RECS certificate	64
Annex D	(informative) Flowchart of IEC/TS 62668-1 requirements	65
Bibliography	66
Figure 1	– Suspect components perimeter	19
Table 1	– Anti-counterfeit awareness training guidelines	16
Table 2	– IEC/TS 62668-1 requirements waived if OEM has an approved SAE AS5553A plan	34

ITeH Standards
(<https://standards.iteh.ai>)
Document Preview

IEC TS 62668-1:2014

<https://standards.iteh.ai/Catalogue/standards/iec/76c8be0f-7073-4d6d-9dd2-df90bc951e48/iec-ts-62668-1-2014>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PROCESS MANAGEMENT FOR AVIONICS –
COUNTERFEIT PREVENTION –****Part 1: Avoiding the use of counterfeit, fraudulent
and recycled electronic components**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC/TS 62668-1, which is a technical specification, has been prepared by IEC technical committee 107: Process management for avionics.

This second edition cancels and replaces the first edition, published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Update of “fraudulent component” definition, addition of “recycled component” and “suspect component” definitions, and updates of the concerned clauses accordingly.
- b) Addition of counterfeit awareness training as a requirement.
- c) Revision to update all references and web links in the annexes.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
107/226/DTS	107/235/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 62668 series, published under the general title *Process management for avionics – Counterfeit prevention*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

PROCESS MANAGEMENT FOR AVIONICS – COUNTERFEIT PREVENTION –

Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components

1 Scope

This part of IEC 62668, which is a Technical Specification, defines requirements for avoiding the use of counterfeit, recycled and fraudulent components used in the aerospace, defence and high performance (ADHP) industries. It also defines requirements for ADHP industries to maintain their intellectual property (IP) for all of their products and services. The risks associated with purchasing components outside of franchised distributor networks are considered in IEC/TS 62668-2. Although developed for the avionics industry, this specification may be applied by other high performance and high reliability industries at their discretion.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC/TS 62239-1, *Process management for avionics – Management plan – Part 1: Preparation and maintenance of an electronic components management plan*

IEC/PAS 62435, *Electronic components – Long-duration storage of electronic components – Guidance for implementation*

IEC/TS 62668-2, *Process management for avionics – Counterfeit prevention – Part 2: Managing electronic components from non-franchised sources*

ISO 9001, *Quality management systems – Requirements*

AS/EN/JISQ 9100, *Quality Management Systems – Requirements for Aviation, Space and Defense Organizations*

AS/EN/JISQ 9110:2003, *Quality Maintenance Systems – Aerospace – Requirements for Maintenance Organizations*

AS/EN/JISQ 9120, *Quality Management Systems – Requirements for Aviation, Space and Defense Distributors*

GEIA-STD-0016, *Standard for Preparing a DMSMS Management Plan*

IDEA-STD-1010B, *Acceptability of electronic components distributed in the open market*

SAE AS5553A *Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition*

SAE AS6081 *Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition – Distributors Verification Criteria*

SAE AS6174, *Counterfeit Material: Detection, Mitigation and Disposition*¹

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

aftermarket source

reseller which may or may not be under contract with the original component manufacturer (OCM), or is sometimes a component “re-manufacturer”, under contract with the OCM

Note 1 to entry: The reseller accumulates inventories of encapsulated or non-encapsulated (wafer) components whose end of life date has been published by the OCM. These components are then resold at a profit to fill a need within the market for components that have become obsolete.

3.1.2

broker

individual or corporate organization that serves as an intermediary between buyer and seller

Note 1 to entry: In the electronic component sector a broker specifically seeks to supply obsolete or hard to find components in order to turn a profit. To do so it may accumulate an inventory of components considered to be of strategic value or may rely on inventories accumulated by others. The broker operates within a worldwide component exchange network.

3.1.3

COTS

commercial off-the-shelf products

one or more pieces, mechanical or electrical, developed for multiple commercial consumers, whose design and/or configuration is controlled by the supplier's specification or industry standard

Note 1 to entry: They can include electronic components, subassemblies, or top level assemblies. COTS subassemblies include circuit card assemblies, power supplies, hard drives, and memory modules. Top-level COTS assemblies include a fully integrated rack of equipment such as raid arrays, file servers to individual switches, routers, personal computers, or similar equipment.

3.1.4

counterfeit, verb

action of simulating, reproducing or modifying a material good or its packaging without authorization

Note 1 to entry: It is the practice of producing products which are imitations or are fake goods or services. This activity infringes the intellectual property rights of the original manufacturer and is an illegal act. Counterfeiting generally relates to wilful trademark infringement.

3.1.5

counterfeited component

material good imitating or copying an authentic material good which may be covered by the protection of one or more registered or confidential intellectual property rights

Note 1 to entry: A counterfeited component is one whose identity or pedigree has been altered or misrepresented by its supplier.

Identity = original manufacturer, part number, date code, lot number, testing, inspection, documentation or warranty etc.

Pedigree = origin, ownership history, storage, handling, physical condition, previous use etc.

¹ Although published this is being revised for material component only.

3.1.6

customer device specification

device specification written by a user and agreed by the supplier

3.1.7

customer user

original equipment manufacturer (OEM) which purchases electronic components, including integrated circuits and/or semiconductor devices compliant with this technical specification, and uses them to design, produce, and maintain systems

3.1.8

data sheet

document prepared by the manufacturer that describes the electrical, mechanical, and environmental characteristics of the component

3.1.9

franchised distributor or agent

individual or corporate organisation that is legally independent from the franchiser (in this case the electronic component manufacturer or OCM) and agrees under contract to distribute products using the franchiser's name and sales network

Note 1 to entry: Distribution activities are carried out in accordance with standards set and controlled by the franchiser. Shipments against orders placed can be despatched either direct from the OCM or the franchised distributor or agent. In other words, the franchised distributor enters into contractual agreements with one or more electronic component manufacturers to distribute and sell the said components. Distribution agreements may be stipulated according to the following criteria: geographical area, type of clientele (avionics for example), maximum manufacturing lot size. Components sourced through this route are protected by the OCM's warranty and supplied with full traceability.

3.1.10

fraudulent component

electronic component produced or distributed either in violation of regional or local law or regulation, or with the intent to deceive the customer

Note 1 to entry: This includes but is not limited to the following which are examples of components which are fraudulently sold as new ones to a customer:

- (1) a stolen component;
- (2) a component scrapped by the original component manufacturer (OCM) or by any user;
- (3) a recycled component, that becomes a fraudulent recycled component when it is a disassembled component resold as a new component (see Figure 1), where typically there is evidence of prior use and rework (e.g. solder, re-plating or lead re-attachment activity) on the component package terminations;
- (4) a counterfeit component, a copy, an imitation, a full or partial substitute of brands;
- (5) fraudulent designs, models, patents, software or copyright sold as being new and authentic, For example: a component whose production and distribution are not controlled by the original manufacturer;
- (6) unlicensed copies of a design;
- (7) a disguised component (re-marking of the original manufacturer's name, reference date/code or other identifiers etc.), which may be a counterfeit component; see Figure 1;
- (8) a component without an internal silicon die or with a substituted silicon die which is not the original manufacturer's silicon die.

3.1.11

microcircuit component device

electrical or electronic device that is not subject to disassembly without destruction or impairment of design use and is a small circuit having a high equivalent circuit element

density which is considered as a single part composed of interconnected elements on or within a single substrate to perform an electronic circuit function

Note 1 to entry: This excludes printed wiring boards/printed circuit boards, circuit card assemblies and modules composed exclusively of discrete electronic components.

3.1.12

non-franchised distributor

companies which do not fall under a franchised distributor or OCM

Note 1 to entry: These distributors may purchase components from component manufacturers, franchised distributors, or through other supply channels (open markets). These distributors cannot always provide the guarantees and support provided by the franchised distributor network; components sourced through this source are usually protected by the source's warranty only. However, some of them are able to purchase traceable components and/or to provide traceability paperwork and/or are able to return stock for investigation to the OCM.

3.1.13

OCM

original component manufacturer

company specifying and manufacturing the electronic component

3.1.14

OEM

original equipment manufacturer

manufacturer which defines the electronic subassembly that includes the electronic components or defines the components used in an assembly and/or test specification

3.1.15

piracy

willful copyright infringement

3.1.16

reseller

general supplier which offers a selection of electronic components to order from a catalog

3.1.17

recycled component

electrical component removed from its original product or assembly and available for reuse

Note 1 to entry: The component has authentic logos, trademarks and markings. However, it typically has no output to measure the useful life remaining for its reuse. A recycled component can fail earlier than a new one when re-assembled into another product or assembly. A recycled component may also be physically or ESD damaged during the removal process.

3.1.18

semiconductor

electronic component in which the characteristic distinguishing electronic conduction takes place within a semiconductor

Note 1 to entry: This includes semiconductor diodes which are semiconductor devices having two terminals and exhibiting a nonlinear voltage-current characteristic and transistors which are active semiconductor devices capable of providing power amplification and having three or more terminals.

3.1.19

subcontractor

manufacturer of electronic subassemblies or supplier manufacturing items in compliance with customer design data pack and drawings, and under the authority of the OEM

Note 1 to entry: This supplier can potentially procure all or part of the electronic components required to produce a subassembly and is often referred to as the contract electronic manufacturer (CEM) or electronics manufacturing services (EMS).

**3.1.20
supplier**

company which provides to another an electronic component which is identified by the logo or name marked on the device

Note 1 to entry: A supplier can be an OCM, a franchised distributor or agent, a non-franchised distributor, broker, reseller, OEM, CEM, and EMS, etc.

**3.1.21
suspect component**

electronic component which has lost supply chain traceability back to the original manufacturer and which may have been misrepresented by the supplier or manufacturer and may meet the definition of fraudulent or counterfeit component

Note 1 to entry: Suspect components may include but are not limited to:

- (1) counterfeit components;
- (2) recycled components coming from uncontrolled recycling operations carried outside of the OEM, franchised network and OEM business where typically it has been fraudulently sold to the OEM as being in a new unused condition.

**3.1.22
traceability**

ability to have for an electronic component its full trace back to the original component manufacturer

Note 1 to entry: This traceability means that every supplier in the supply chain is prepared to legally declare in writing that they know and can identify their source of supply, which goes back to the original manufacturer and can confirm that the electronic components are brand new and were handled with appropriate ESD and MSL handling precautions. This authenticates that the electronic components being supplied are unused, brand new components with no ESD, MSL or other damage. This ensures that the electronic components are protected by any manufacturer's warranties, have all of their useful life remaining and function according to the manufacturer's published datasheet, exhibiting the expected component life in the application for the OEM's reliability predictions and product warranty.

**3.1.23
untraceable**

property of electronic components which have lost their traceability (see 3.1.22)

3.2 Abbreviations

AAIPT	Alliance Against IP Theft
ACTA	Anti-Counterfeit Trade Agreement
ACTF	Semiconductor Industries Association Anti Counterfeit Task Force
ADHP	aerospace, defence and high performance
ASIC	Application Specific Integrated Circuit
ATP	acceptance test procedure
BEAMA	British Electrotechnical Allied Manufacturers' Association
CATA	China Anti-counterfeit Technology Association
CB	Certifying Bodies (Third Party)
COTS	commercial off-the-shelf
CEM	contract electronic manufacturer
CEPA	Chinese Electronic Purchasing Association
CQAE	China Quality Management Association for Electronics Industry
CMOS	complementary metal oxide semiconductor
DFAR	Defense Federal Acquisition Regulation
DOD	Department of Defence (US)