COUNTERFEIT PARTS MITIGATION MANUAL

DOCUMENT REVISION RECORD					
REV	DCN NO.	CHANGE DESCRIPTION	CHG BY	DATE	APVD
A		Released			
C		Updates to paragraph 4.2 Purchasing	PDW	1/31/13	AKC
D	14001	Number (110-0007-QAP) and title changed to current system	AKC	5/1/14	KM
E	15014	Updated to current Procedure and practices	JRP	10/15/15	HS
F	18006	Section 4.2 – Changed PMI-PGP-3001 to PMI-Q-P-7013	JRP	6/6/18	HS
G	21001	Updated per AS5553 Rev C, Added applicable PMI Procedures	JRP	2/21/21	HS

1.0 SCOPE:

1.1 Purpose:

A. Maximize the availability of high quality, reliable parts to our customers.
B. To ensure the procurement of parts, boards, accessories, etc. from reliable sources.
C. To assure the authenticity and conformance of procured parts etc.
D. To control any parts identified as counterfeit and report such to appropriate authorities.

1.2 Application:

This plan is to be used with procedures, throughout the procurement process at Planar Monolithics Industries, Inc. (PMI), to mitigate any chance for the unintentional purchase of counterfeit parts.

2.0 APPLICABLE DOCUMENTS:

This plan is recommended for use by all departments that procure electronic parts, whether such parts are procured directly or integrated into electronic assemblies or equipment. The requirements of this procedure are generic and intended to be applied / flowed down to all vendors from whom PMI procures electronic parts, regardless of type, size, and product provided. This document follows the spirit of SAE Aerospace Standard AS5553 and it is the primary source document for this procedure.

2.1 Other Documents:

ISO 9001:2015	Quality Management Systems (QMS) Requirements
PMI-E-P-3011	Design and Development Procedures
PMI-M-P-4020	Operator Training and Qualification
PMI-M-P-4021	Receiving
PMI-P-P-5001	Purchasing System Procedure
PMI-P-P-5002	Supplier Evaluation and Approval / Disapproval
PMI-Q-P-7001	Nonconforming Material
PMI-Q-P-7005	Internal Audits
PMI-Q-F-7015-1	Supplier Facility Survey/Audits Form

3.0 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions listed in ISO 9000 and the following apply. In the event of a conflict of definitions, the definitions herein shall take precedence.

Throughout the text of this document, whenever the term "Product" occurs, it can also mean "service." Throughout the text of this document, whenever the term "part" occurs, it is synonymous with "component."

3.1 Suspect Counterfeit EEE Part

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

3.2 Counterfeit EEE Part

1) An unauthorized (a) copy, (b) imitation, (c) substitute, or (d) modified EEE part, which is knowingly, recklessly, or negligently misrepresented as a specified genuine item from an original component manufacturer or authorized aftermarket 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 1: 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. These issues are covered under existing laws covering fraud. For civil matters, this issue would typically be covered under civil fraud and terms and conditions of a purchase order or contract that specifies EEE parts must be new.

   Note 2: Parts which have been refinished, upscreened, or uprated, and have been identified as such, are not considered counterfeit.

   Note 3: Examples of a counterfeit part can include, but are not limited to: the false identification of grade, serial number, date code, or performance characteristics.

3.3 Related Definitions

- AUTHORIZED AFTERMARKET MANUFACTUER: A manufacturer that meets on or more of the following criteria:

  a. 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:

     1) Transferred from the OCM to the aftermarket manufacturer, or

     2) Produced by the aftermarket manufacturer using OCM tooling and/or intellectual property (IP)

- AUTHORIZED (FRANCHISED) DISTRIBUTION: Transactions conducted by an organized distributing product within the terms of a contractual agreement with the original component manufacturer:

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

- AUTHORIZED (FRANCHIED) DISTRUBUTOR: An organization that performs authorized distribution. A franchised distributor is considered synonymous with an authorized distributor.

- 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.

- DESIGN AUTHORITY: An organization with formal authority for the design, validations, and service support of a product.

- ELECTRICAL, ELECTRONIC, AND ELECTROMECHANICAL (EEE) PART: Components designed and built to perform specific functions using electric power and/or an electrical or electromagnetic signal to demonstrate functionality, which are not subject to disassembly without destructions or impairment of design use.

  Note: An electromagnetic signal can consist of the following: radio waves, microwaves, infrared waves, visible light, ultraviolet waves, x-rays, and gamma rays. For a partial list of examples, see below: electrical parts include resistors, capacitors, inductors, wires, cables, transformers, and

connectors; electronic parts include active devices, such as monolithic microcircuits, hybrid microcircuits, diodes, and transistors; electromechanical parts have electrical inputs with mechanical outputs, or mechanical inputs with electrical outputs, or combinations of each; examples of electromechanical parts are motors, synchros, servos, and some relays which may appear as assemblies, but are considered EEE parts.

- FRANCHISED DISTRIBUTION: For the purposes of this Standard, franchised distributors is considered synonymous with authorized distributor (see "Authorized (Franchised) Distribution" definition).

- FRANCHISED DISTRIBUTORS: Also known as authorized distributors (see "Authorized (Franchised) Distributor definition).

- MANUFACTURER: An organization that produces and sells products with legal rights or authority under the organization's name or contracts with another to do so; includes original component manufacturer (OCM) and original equipment manufacturer (OEM).

- MAINTENANCE, REPAIR, AND OVERHAUL (MRO): An organization that maintains or restores an item in or to a state in which it can perform its required function.

  Note: MRO often refers to civil aviation maintenances, and depot-level maintenances often refers to military vehicle maintenance.

- ORIGINAL COMPONENT MANUFACTURER (OCM): An entity that designs and/or engineers a part and is pursuing or has obtained that intellectual property rights to that part or the process used to produce the part.

  Note 1: The part and/or its packaging are typically identified with the OCM's trademark.

  Note 2: OCMs may contract out manufacturing and/or distribution of their product.

  Note 3: Different OCMs may supply product for the same application or to a common specification.

- ORIGINAL EQUIPMENT MANUFACTURER (OEM): A company with design authority that sells products manufactured and assembled from EEE parts under the company's brand name.

  Note 1: The part and/or its packaging are typically identified with the OCM's trademark

  Note 2: OCMs may contract out manufacturing and/or distribution of their product.

Note 3: Different OCMs may supply product for the same application or to a common specification.

- ORIGINAL EQUIPMENT MANUFACTURER (OEM): A company with design authority that sells products manufactured and assembled from EEE parts under the company's brand name.

- PART(S): One or more pieces joined together, which are not normally subject to disassembly, without destruction or impairment of intended design use. For the purposes in this document, "part" is synonymous with "component," "EEE part," and "EEE component."

- SUPPLIER: Within the context of this document, a blanket description of all sources of supply for a part. Types of suppliers include (OCM, OEM, authorized (franchised) distributors and other distributors, authorized aftermarket manufacturers, government supply depots, and third-party logistics (3PL) providers.

- THIRD-PARTY LOGISTICS (3PL) PROVIDERS: A firm that provides outsourced or "third party" logistics (3PL) services to companies for supply chain management functions.

  Note: A 3PL provider typically specializes in integrated operation(s), warehousing, and transportation services that can be scaled and customized to a customer's needs based on market conditions and the demands and delivery services requirements for its products.

4.0 REQUIREMENTS

4.1 Counterfeit EEE Parts Control Plan

The organization shall develop and implement a risk-based counterfeit EEE parts control plan that documents its processes used to risk identification, mitigation, detection, avoidance, disposition, and reporting of suspect counterfeit or counterfeit EEE parts and/or assemblies containing such EEE parts.
The control plan shall include the processes described in 3.1.1 through 3.2
The control plan shall be maintained, updated, and sustained based on evolving counterfeiting techniques and trends.

Note: The plan updates may include avoidance techniques and information contained in industry standards.

4.2 Personal Training

The organization shall train employees in the awareness, avoidance, detection, mitigation, and disposition of suspect counterfeit or counterfeit parts, 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, receiving, manufacturing, and engineering activities.

See PMI Procedure, PMI-M-P-4020, Operator Training and Qualification

4.3 EEE Parts Availability

The processes shall maximize the use of available, authentic, originally designed, and qualified EEE parts throughout the product's life cycle (e.g., addresses obsolescence risk, as in STD 0016).
Note: When availability or obsolescence risk are identified, the resolution process should consider: lifetime buys, alternate / multiple sources, adequate procurement lead times, development of new items or sources, redesign, or other appropriate mechanisms to proactively reduce the risk of exposure to suspect counterfeit our counterfeit EEE parts. Recommend customer notification of identified obsolescence risk and proposed actions.

See PMI Design and Development Procedure PMI-E-P-3011, Section 5.5 for implementation method

"Parts Obsolescence techniques for high level Type I components; Critical process materials, PWB, PWBA or Special MMIC's, are to be taken into consideration and documented in the Critical Design Review Actions / Notes form.

Examples of design obsolescence mitigation techniques include the following:

a. Use of multiple manufacturers' components
b. Use of Industry Standard Components and techniques
c. Considering and designing around near alternate components"

4.4 Purchasing Process

The processes shall:

a. Assure procurement of EEE parts from authorized sources, or from those suppliers who provide EEE parts obtained exclusively from authorized sources, when the EEE parts are still being manufactured or available in stock directly from such sources.

See PMI Supplier Evaluation and Approval / Disapproval Procedure PMI-P-P-5002, Section 5.1 for implementation method

"When a vendor is added to the Approved Vendor List for Type I and Type II vendors, the Quality Assurance Manager or his/her representative will be notified so that proper surveys/audits can be performed."

b. Ensure objective evidence is maintained that the EEE parts supplier is an authorized source or a supplier who provides EEE parts obtained exclusively from authorized sources.

See PMI Receiving Verification / Inspection Procedure PMI-Q-P-7013, Section 5.1.5.1 for implementation methods

"The Inspector shall inspect the Packing Slip, C of C and supply chain traceability document (if applicable) for all of the required requirements per the Purchase Order and for authenticity.

If the documentation is not available, suspected of being falsified or does not meet all Purchase Order requirements, the QA Manager shall be notified."

c. When using suppliers that provide EEE parts exclusively from authorized sources, a process shall be established to review, audit, and/or evaluate sources and transactions to:

1) Ensure parts have been obtained from authorized sources;

See PMI Supplier Evaluation and Approval / Disapproval Procedure PMI-P-P-5002, Section 5.1 for implementation method

"When a vendor is added to the Approved Vendor List for Type I and Type II vendors, the Quality Assurance Manager or his/her representative will be notified so that proper surveys/audits can be performed."

2) Ensure that the source has inventory control processes to prevent comingling of material from authorized sources and non-authorized sources.

See PMI Supplier Facility Survey/Audits, Procedure PMI-Q-F-7015-1, Question XVII, for implementation methods

d. Evaluate, select, and monitor suppliers using sources of counterfeiting information to avoid purchase or use of suspect counterfeit or counterfeit EEE parts.

See PMI Supplier Evaluation and Approval / Disapproval Procedure PMI-P-P-5002, Section 5.4 for implementation methods

"This record provides a continual evaluation of the performance of the vendor and is used by the Purchasing representative to establish his credibility when placing orders."

e. Require a documented risk assessment and risk mitigation process by the organization with the technical responsibility for procurements from other than: (1) authorized sources, or (2) sources who provide EEE parts obtained exclusively from authorized sources.

1) The risk assessment shall address:

i. The likelihood of receiving a suspect counterfeit or counterfeit EEE part from the source:
ii. The consequences of a suspect counterfeit or counterfeit EEE part being installed (e.g., human safety, mission success, additional cost) where such consequences are made known to the organization.

2) The risk mitigation process shall document inspections and/or test that are utilized commensurate with the risk including acceptance and reject criteria.

Note 1: Tests, inspections, and other risk mitigation methods should be performed in accordance with accepted customer and industry-recognized standards (e.g., AS6171, AS6081, CCAP-101, IDEA-STD-1010) and techniques designed to intercept and avoid the use of suspect counterfeit or counterfeit EEE parts.

Note 2: Suppliers should be screened against current counterfeit data, including part numbers and sources of supply. Consider source selection based on the source's application of recognized industry counterfeit avoidance standards (e.g., AS6081, AS6496, ARP6328, AS6171). Consider other sources of information about counterfeiting prior to procurement of EEE parts (e.g., GIDEP, ERAI, anti-counterfeiting forum). The extent of performance monitoring applied should be determined by the level of risk involved in the procurement, the nature of the product, and the source of supply. A combination of monitoring methods can be used effectively to ensure that outcomes are achieved. Assurance actions may include surveys, audits, review of product alerts (e.g., GIDEP, ERAI, anti-counterfeiting forum), review of supplier quality data, compliance to counterfeit avoidance and detection industry standards, or other methods deemed appropriate for the procurement.

4.5 Purchasing Information

The documented process shall specify contract/purchase order requirements to minimize the risk of being provided suspect counterfeit or counterfeit EEE parts. This includes:

a. Flow down applicable counterfeit avoidance and detection requirements to applicable contractors and their supply chain;
b. Flow down a requirement for authorized distributors to disclose if they are not authorized for the EEE parts they are supplying.

See PMI Purchasing System Procedure PMI-P-P-5001, Section 5.6.3.b for implementation methods

"Any Vendor instructions or PMI QA instructions / codes are to be added to the "NOTES" field in the *MRP System*."

4.6 Verification of Purchased EEE Part(s)

The documented process shall verify that risk mitigation per 3.1.3.e is performed and meets acceptance criteria.

See PMI Receiving Verification / Inspection Procedure PMI-Q-P-7013, , Section 5.1.5.1 for implementation methods.

"The Inspector shall inspect the Packing Slip, C of C and supply chain traceability document (if applicable) for all of the required requirements per the Purchase Order and for authenticity."

4.7 Investigation

The organization shall investigate suspect counterfeit and counterfeit EEE parts. The documented processes for the investigation shall address the detection, verification, resolution, and control of in-process (post acceptance) and in-service suspect counterfeit or counterfeit EEE parts.

See PMI Receiving Verification / Inspection Procedure PMI-Q-P-7013, Section 5.6.3.b for implementation method

"The Inspector will first examine all documentation and the traveler to verify that all required documentation is present and the traveler is properly completed to the In-process Inspection step."

4.8 Material Traceability and Control

The documented processes shall:

a. Enable tracking of procured EEE parts back to an authorized source or mitigated risk per 3.1.3.e prior to acceptance.

   Note 1: Authorized source/distributor records enable traceability/tracking to the manufacturer (e.g., OCM/OEM).

Note 2: It is desirable for EEE parts traceability/tracking while in inventory.

See PMI Receiving Verification / Inspection Procedure PMI-Q-P-7013, Section 5.1.5.1 for implementation methods

"The Inspector shall inspect the Packing Slip, C of C and supply chain traceability document (if applicable) for all of the required requirements per the Purchase Order and for authenticity.

If the documentation is not available, suspected of being falsified or does not meet all Purchase Order requirements, the QA Manager shall be notified."

b. Enable identification of the EEE parts and/or assemblies to the product(s) impacted when suspect counterfeit or counterfeit EEE parts or assemblies are discovered prior to or after customer acceptance.

See PMI Quality Assurance Manual PMI-Q-P-7001, Section 5.6.4 for implementation methods

"If a production piece part is found to be non-conforming, kitting records and job folders for products using that part will be examined to determine if other parts from the same lots were used in products that have already been delivered. If so, the Quality Manager will notify the customer so that proper disposition can be made."

c. Control suspect counterfeit or counterfeit EEE parts to preclude their use or reentry into the supply chain by physically identifying and segregated the EEE parts from acceptance non-suspect EEE parts and placed in quarantine until dispositioned. Quarantine shall consist of controlled access space.

See PMI Quality Assurance Manual PMI-Q-P-7001, Section 5.2 for implementation methods

"Whenever Nonconforming Material is identified it will be plainly marked, removed from production material and stored in a area reserved for Nonconforming Material."

d. Permanently render as unusable all suspect counterfeit or counterfeit EEE parts dispositioned for scrap, including the internal elements.

See PMI Quality Assurance Manual PMI-Q-P-7001, Section 5.6.3 for implementation methods

"MRB Dispositions include Scrap"

e. Assure all production EEE part inventories affected by the suspect counterfeit or counterfeit parts is contained for disposition.

See PMI Quality Assurance Manual PMI-Q-P-7001, Section 5.6.4 for implementation methods

"If a production piece part is found to be non-conforming, kitting records and job folders for products using that part will be examined to determine if other parts from the same lots were used in products that have already been delivered. If so, the Quality Manager will notify the customer so that proper disposition can be made."

f. Implement a returns process which segregates returned EEE parts until they are verified as new and unused.

See PMI Receiving Procedure, PMI-M-P-4021, Section 5.1 for the implementation method

"If the Item is a reworked or replacement of a non-conforming component returned to the vendor, then route it to the QA designated hold area for processing."

4.9 Reporting

When the organization has determined any EEE part or end item, component, part, or assembly containing EEE parts purchased by the organization, or delivered to the organization, to be suspect counterfeit or counterfeit, the organization shall report the suspect counterfeit or counterfeit part in accordance with the organization's quality management system and applicable contractual requirements.

See PMI Nonconforming Material Procedure PMI-Q-P-7001, Section 5.6.5 for implementation method

"If Non-Conforming material is suspected of being counterfeit, the appropriate agencies shall be notified."

"If any suspected parts have been delivered to customers, the customer shall be notified per PMI-Q-P-7019 (Customer Notification) "

5.0 QUALITY ASSURANCE REQUIREMENTS

5.1 General

5.1.1 Auditing

The organization's QMS internal audit program shall address AS5553.

See PMI Internal Audits Procedure, PMI-Q-P-7005, for implementation method