


| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

AVNET Asia Warehouse & Distribution

ISO 9001:2000 Quality Manual

For

Employees & Customers

| Rev. | DCR# | Date | Originator | Reason for Change | Change Detail |
|------|---------------|----------------|------------|-------------------|---------------|
| 0 | TWWDCR 088 | Sep 30 2004 | Sandy Lim | Initial Release | N.A. |
| | | | | | |
| | | | | | |



| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

Table of Content

| No. | Page No. | Paragraph No. | Subject Title | ISO 9001:2000 Clause No. |
|-----|----------|---------------|--|--------------------------|
| 1 | 1 | – | Cover Page | – |
| 2 | 2 | – | Table of Content | – |
| 3 | 3 | – | Quality Policy Statement | – |
| 4 | 4 | – | Avnet Asia Avnet Warehouse - Background | – |
| 5 | 5 | 1.0 | Purpose | – |
| 6 | 5 | 2.0 | Scope | – |
| 7 | 5 | 3.0 | Reference Document | – |
| 8 | 5-7 | 4.0 | Quality Management System | 4 |
| 9 | 5 | 4.1 | Quality Management System Planning | 4.1 |
| 10 | 5 | 4.2 | Documentation | 4.2 |
| 11 | 5-6 | 4.2.1 | General Requirement | 4.2.1 |
| 12 | 7 | 4.2.2 | Quality Manual | 4.2.2 |
| 13 | 7 | 4.2.3 | Document Control | 4.2.3 |
| 14 | 7 | 4.2.4 | Control of Records | 4.2.4 |
| 15 | 8–9 | 5.0 | Management Responsibility | 5 |
| 16 | 9–10 | 6.0 | Resources Management | 6 |
| 17 | 10–13 | 7.0 | Product Realization | 7 |
| 18 | 10 | 7.1 | Product Realization Planning | 7.1 |
| 19 | 10–11 | 7.2 | Customer Related Process | 7.2 |
| 20 | 11 | 7.3 | Design and Development | 7.3 |
| 21 | 12 | 7.4 | Purchasing | 7.4 |
| 22 | 12–13 | 7.5 | Production and Service Provision | 7.5 |
| 23 | 12 | 7.5.1 | Control of Production and Service Provision | 7.5.1 |
| 24 | 12 | 7.5.2 | Validation of Processes for Production & Service Provision | 7.5.2 |
| 25 | 13 | 7.5.3 | Identification & Traceability | 7.5.3 |
| 26 | 13 | 7.5.4 | Customer Supplied Product | 7.5.4 |
| 27 | 13 | 7.5.5 | Product Preservation | 7.5.5 |
| 28 | 13 | 7.6 | Control of Monitoring and Measuring Devices | 7.6 |
| 29 | 14–15 | 8.0 | Measurement, Analysis and Improvement | 8 |
| 30 | 14 | 8.1 | General Requirement | 8.1 |
| 31 | 14 | 8.2 | Monitoring and Measurement | 8.2 |
| 32 | 14 | 8.2.1 | Customer Satisfaction | 8.2.1 |
| 33 | 14 | 8.2.2 | Internal Quality Audit | 8.2.2 |
| 34 | 14 | 8.2.3 | Monitoring and Measurement of Processes | 8.2.3 |
| 35 | 14 | 8.2.4 | Monitoring and Measurement of Product | 8.2.4 |
| 36 | 14–15 | 8.3 | Control of Nonconforming Products | 8.3 |
| 37 | 15 | 8.4 | Analysis of Data | 8.4 |
| 38 | 15 | 8.5 | Improvement | 8.5 |
| 39 | 15 | 8.5.1 | Continual Improvement | 8.5.1 |
| 40 | 15 | 8.5.2 | Corrective Action | 8.5.2 |
| 41 | 15 | 8.5.3 | Preventive Action | 8.5.3 |
| 42 | 16 | Annex A | Avnet A.P.C. Quality Management System Process Plan | 4.1, 4.2.2, 5.4.2 |
| 43 | 17 | Annex B | Quality Management System Organization Structure | 5.5.1 |
| 44 | 17 | Annex B | Responsibility, Authority & Interface Matrix | 5.5.1 |
| 45 | 18 | Annex C | Quality Responsibility, Authority & Required Competency | 5.5.1, 6.2, 6.6.2 |

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

Quality Policy Statement


Each Avnet Asia Warehouse employee will
**Provide defect-free and highest value services and
products that meet or exceed our commitments
to our customers.**

We will achieve this through the process of
defining and understanding,
as well as
**conforming to agreed and applied requirements and
work towards continual improvement
and the effectiveness of
our Quality Management System.**

Director of Operations
(Avnet Warehouse)

Operations Manager
Avnet Warehouse

Regional QA Manager /
Management Representative

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

AVNET Asia Warehousing Background

Establishment: **August 1999**

Official Commencement: **August 1999**

Official Opening by: **President, Avnet Electronics Marketing**

Business Activity: **Warehousing & Distribution Services for active and passive components to OEM customers and other end customers.**

Operation Mode: **1 Shift**

Capabilities: **Warehousing & Distribution Services**

- To provide standard labeling and packaging for active and passive components for end customers
- To provide customise labeling and packaging for end customers
- To provide special packaging per customers requirements
- To provide 2 hours turn around time for urgent delivery
- To provide drop shipment to different customers
- To provide programming parts when required by customers
- Able to handle at least 300 outgoing orders everyday on quarterly average

Equipment

- Vacuum sealer
- ESD wrist strap and footwear checker
- Tray strapping
- Hydro-graph meters
- Pallet jacks
- Weighting scale
- Label printer
- Stacker
- Work stations / Trolley

Operating Work Environment


ESD Control Practice,
30-75% Ambient R.H
20--30°C Ambient Temperatures

Key Officers: **Sandy Lim, Regional QA Manager, email-id: Sandy.Lim@avnet.com**
Rakesh Mahajan, Operations Director, email-id: __Rakesh.Mahajan@avnet.com

Contact Address: **7 Changi South St. 2 #01-00**
Singapore 486415

Contact Telephone: **65407701, 65407721**

Contact Fax: **65453703**

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

1.0 PURPOSE

1.1 This Quality Manual defines the Quality Management System covering Quality Policy Statement, quality commitment, organizational quality structure, quality responsibility and authority of personnel, deployed, understood, implemented, and maintained at all levels of Avnet Asia Warehouse and Distribution Operations.

2.0 SCOPE

2.1 This Quality Manual is applicable to production Warehouse and Distribution service activity and all departments of Avnet Asia Warehouse and Distribution Operation applying the 8 Principles of Total Quality Management System to ensure processes and products satisfy requirements and ISO 9001:2000 Quality Management System Requirement Standard.

3.0 REFERENCED DOCUMENTS

- 3.1 ISO 9001:2000 – Quality Management Systems Requirements
- 3.2 ISO 19011:2002 Series – Guidelines for Auditing Quality Systems
- 3.3 ISO 10012 – Quality Assurance requirements for measurement system.

4.0 QUALITY MANAGEMENT SYSTEM

4.1 Avnet Asia Warehouse and Distribution operations establishes, documents, implements, maintains and continually improves a Quality Management System meeting ISO 9001:2000 Quality Management System Standards requirements and as a means of ensuring that product conforms to Specified requirements.

The quality management system is described in Annex A of this manual and contains the following;

- a) Processes needed, sequence, interaction and their application throughout Avnet Asia Warehouse and Distribution operations
- b) Reference procedures that describe management activities, availability of resources needed, information criteria, and methods for implementation, necessary to ensure effective operation, control, monitoring, measure, analyze to achieve planned results and continual improvement of these processes in accordance with the requirements of ISO 9001:2000 Quality Management System Requirements Standard.
- c) Purchasing activities controls processes, which are out-sourced for the Warehouse and Distribution operations activities.

4.2 Documentation requirements

4.2.1 Avnet Asia Warehouse and Distribution Operations quality management system documentation comply to ISO 9001:2000 QMS Standard organized into a four (4) tier hierarchical structure that consist of

- + First level quality manual (QM 9001, incorporating quality policy statements),
 - + Second level quality management system process procedures (QMSP),
 - + Third level quality plans, standard operating procedures (SOP), and forms detailing specific tasks of an activity of a process to ensure consistent process output meeting quality objectives,
 - + Fourth level records (incorporating quality objectives statements) demonstrating the effective execution of the quality system and/or satisfying customer requirements.
- a) Quality management system procedures, plans, operating instructions and records are formally documented, effectively implemented and maintained. The range and detail of the procedures are dependent on the complexity of the work, the methods used, and the skills and training needed by personnel involved in carrying out the activity.
 - b) Reference Avnet Asia Warehouse Operations Quality Management Systems Procedures supporting ISO 9001:2000 Q.M.S. Standard is referenced in the Annex 1 and as outlined in the following table:



| | | | | |
|---|---|----------------------------|--|---|
|  | Title: Quality Manual | Doc. No. QM 5001 | Date of Issue: Sep 30 2004 | QA Stamp |
| | Department or Process: Management | Revision 0 | Change Effective Date: Sep 30 2004 | Confidentiality Business Use Only |

Table 1 : Cross Reference of ISO 9001:2000 Quality Management System Requirements to Quality Manual QM5001 and Quality Management System Procedures (QMSP)

| Clause No. | Quality Management System Requirement Subjects | QM 1001 Ref. | QMSP No. |
|------------|--|--------------|----------------|
| 4 | Quality Management System | 4.0 | -- |
| 4.1 | Quality Management System Planning | 4.1 | -- |
| 4.2 | Documentation | 4.2 | -- |
| 4.2.1 | General Requirement | 4.2.1 | -- |
| 4.2.2 | Quality Manual | 4.2.2 | -- |
| 4.2.3 | Document Control | 4.2.3 | QMSP 4 |
| 4.2.4 | Control of Records | 4.2.4 | QMSP 4 |
| 5 | Management Responsibility | 5.0 | QMSP 5 |
| 6 | Resources Management | 6.0 | QMSP 6 |
| 7 | Product Realization | 7.0 | -- |
| 7.1 | Product Realization Planning | 7.1 | QMSP 7 |
| 7.2 | Customer Related Process | 7.2 | QMSP 7 |
| 7.3 | Design and Development | 7.3 | Not Applicable |
| 7.4 | Purchasing | 7.4 | QMSP 7 |
| 7.5 | Production and Service Provision | 7.5 | QMSP 7 |
| 7.5.1 | Control of Production and Service Provision | 7.5.1 | QMSP 7 |
| 7.5.2 | Validation of Processes for Production & Service Provision | 7.5.2 | QMSP 7 |
| 7.5.3 | Identification & Traceability | 7.5.3 | QMSP 7 |
| 7.5.4 | Customer Supplied Product | 7.5.4 | QMSP 7 |
| 7.5.5 | Product Preservation | 7.5.5 | QMSP 7 |
| 7.6 | Control of Monitoring and Measuring Devices | 7.6 | QMSP 7 |
| 8 | Measurement, Analysis and Improvement | 8.0 | -- |
| 8.1 | General Requirement | 8.1 | QMSP 8 |
| 8.2 | Monitoring and Measurement | 8.2 | QMSP 8 |
| 8.2.1 | Customer Satisfaction | 8.2.1 | QMSP 8 |
| 8.2.2 | Internal Quality Audit | 8.2.2 | QMSP 8 |
| 8.2.3 | Monitoring and Measurement of Processes | 8.2.3 | QMSP 8 |
| 8.2.4 | Monitoring and Measurement of Product | 8.2.4 | QMSP 8 |
| 8.3 | Control of Nonconforming Products | 8.3 | QMSP 8 |
| 8.4 | Analysis of Data | 8.4 | QMSP 8 |
| 8.5 | Improvement | 8.5 | QMSP 8 |
| 8.5.1 | Continual Improvement | 8.5.1 | QMSP 8 |
| 8.5.2 | Corrective Action | 8.5.2 | QMSP 8 |
| 8.5.3 | Preventive Action | 8.5.3 | QMSP 8 |

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

4.2.2 Quality Manual


- a) This quality manual establishes the scope of Avnet Asia Warehouse Operations quality management system that includes summary of Avnet Warehouse's activities.
- b) Any exclusion and its justification is stated in the relevant paragraphs.
- c) Documented procedures established for the quality management system is referenced in the table above and Annex A and will be maintained updated.
- d) The interaction between the processes of the quality management system is described in Annex A.

4.2.3 Control of Documents

- a) Avnet Asia Warehouse and Distribution Operations establishes and maintains a documented procedure to control all related documents to ensure the effectiveness quality management system processes outputs including, applicable documents of external origin such as customer/suppliers/regulatory requirements, standards, procedures, and product realization. Documents may be hard copy or electronic media formats.
- b) Documents for continual implementation and their subsequent changes are reviewed and approved for adequacy by authorized designated functions/organizations staff prior to issue. Pertinent background information is provided to authorizing staff upon which their review and approval is based on. The natures of changes, where practicable, are identified in the updated document or the appropriate attachments in revision history.
- c) Master lists of documents for implementation is maintained to identify the documents current revision status, thus, to preclude the use of invalid and/or obsolete documents and is readily available at designated document controller.
- d) Documents are controlled ensuring that:
 - i. Legible and relevant updated versions of applicable documents are available and maintained at all locations where operations essential to the effective functioning of the quality system is performed,
 - ii. Invalid and/or obsolete documents are promptly removed from all points of issue or use, or otherwise identified of its invalid/obsolete status or retained in identified file for historical, legal and/or knowledge preservation purpose.
 - iii. The quality management system procedure for control of documents is as specified in Table 1 above.

4.2.4 Control of Quality Records

- a. Avnet Asia Warehouse Operations establishes control of quality record procedure as specified in Table 1, use and maintain quality records, including applicable quality records from suppliers, to demonstrate conformance to specified requirements and effective operation of the quality management system. Quality records are in the form of hard copy as well as electronic media.
- b. All Quality records retained are legible, identified, collected, stored over retention times in such a way that they are readily identifiable protected from damage, loss or deterioration and retrievable through adequate indexing, access and filing, disposed and is maintained in a quality record master list.
- c. When contractually specified by the customer, quality records are made available to the customer or the customer's Representative for evaluation for an agreed period.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

5.0 MANAGEMENT RESPONSIBILITY

5.1 Management commitment

Top management commits to the development and implementation of the quality management system and continually improving its effectiveness as evidenced by

- Communicating to employees on the importance of meeting customer as well as statutory and regulatory requirements,
- Establishing the Avnet's quality policy,
- Establishing Avnet's quality objectives,
- Conducting management reviews, and
- Ensure the availability of resources to meet quality objectives, product and services to assure customer satisfaction.

5.2 Customer focus

To enhance customer satisfaction, top management determines customer requirements and is met.

5.3 Quality policy

Avnet Asia Warehouse Operations quality policy is defined on page 3 of this manual by its top management whose content is appropriate to the purpose of the Warehouse Operations that includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system.

- Quality Policy** is communicated and understood within the Warehouse Operations, is reviewed for continuing suitability at least annually and is deployed by establishing and reviewing quality objective performances.

5.4 Planning

5.4.1 Quality objectives

Top management plans and establishes quality objectives that are measurable and consistent with the quality policy, meeting requirements product and quality management system at relevant functions and levels within the Warehouse Operations. The qualities objectives are reviewed annually and revised as appropriate during the year and are documented in the management Review Minutes. Actions are planned for implementation in order to achieve the objective set when performances to objective are not met.

5.4.2 Quality management system planning

- The Warehouse Operations Quality Management System Plan as outlined in Annex A of this Quality Manual defines basic processes, interface / interactions required to satisfy the requirements of the ISO 9001:2000 quality management system standard, quality policy, quality objectives and customer satisfaction.
- When changes to the quality management system are planned and implemented, the integrity of the quality management system is maintained to ensure continued or enhanced compliance to ISO 9001:2000 quality management system standard, quality policy, quality objectives and customer satisfaction.


5.5 Responsibility, authority and communication

5.5.1 Responsibility and authority

The responsibilities and authorities for the Quality Management System as documented in this manual is defined in Annexes B and C and is communicated within the Warehouse Operations through controlled document distribution by Document Control Avnet Warehouse.

5.5.2 Management representative

- The Warehouse Operations Management Representative is Avnet Asia Regional QA Manager, appointed by Avnet Asia Vice-President of Operations.
- The Management Representative establishes, facilitates implementation and ensures maintenance of quality management system processes to meet ISO 9001:2000 and customer requirements. He reports the performance of the quality management system, any need for improvement to Warehouse Operations top management, and ensures the promotion of awareness of customer requirements in the Operations.
- The Management Representative also liaison with external parties on matters relating to the quality management system.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

5.5.3 Internal communication

The effectiveness of the quality management system is communicated to staff and employees of the company in management review meetings, memorandums and notice board displays and briefings conducted.

5.6 Management review

5.6.1 General

Avnet Asia Warehouse Operations Top management consist of Heads of Functional Department reviews the organization's quality management system, *at least 2 times annually*, to ensure it's continuing suitability, adequacy and effectiveness. This review assesses Avnet's quality policy and quality objectives results of internal quality audits performed and preventive measures including opportunities for improvement and the need for changes to the quality management system. The Management Representative maintains records of management reviews.

5.6.2 Review input

The inputs to management review include information on

- a) Results of audits,
- b) Customer feedback,
- c) Process performance and product conformity,
- d) Status of preventive and corrective actions,
- e) Follow-up actions from previous management reviews,
- f) Planned changes that could affect the quality management system and
- g) Recommendations for improvement.

5.6.3 Review output

The outputs from the management review include decisions and actions related to

- a) Improvement of the effectiveness of the quality management system and its processes,
- b) Improvement of product related to customer requirements, and
- c) Resource needs.

6.0 RESOURCE MANAGEMENT

6.1 Provision of resources

In order to implement and maintain the quality management system and continually improve its effectiveness, and to enhance customer satisfaction by meeting their requirements Avnet Asia Warehouse Operations provide appropriate human, infrastructure and work environment resources needed to enable the product Warehouse Operations servicing activities.


6.2 Human resources

6.2.1 General

Competent personnel based on appropriate education, training, skills and experience are assigned to perform work affecting product quality.

Their responsibility and authority and interrelationship to manage, perform and verify work include;

- i. Initiate action to prevent occurrence of nonconformity, identify and record any problems, initiate and recommend or provide or verify the implementation solutions through designated channels, relating to product, process and quality system; or
- ii. Control further processing, delivery, or installation of nonconforming product until the deficiency or unsatisfactory condition has been corrected.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

6.2.2 Training, awareness and competency

- a) Avnet Asia Warehouse Operations determines the necessary competence for personnel performing work affecting product quality (see annex C), provide training or appropriate actions to satisfy the identified competencies that include awareness of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives.
- b) The effectiveness of the training and actions is evaluated through testing, job performance review, quality audits, management review of performances of quality management processes or tasks executed by the assigned personnel meeting process or job quality objectives, as appropriate.
- c) Records of training including education, training, skills and experience are maintained in as listed on the Quality Records master list.

6.3 Infrastructure

6.3.1 Infrastructure needed to achieve the conformity to product requirements such as buildings, workspace and associated utilities, process equipment (both hardware and software), supporting services (such as transport or communication), are determined and identified in quality plan and the relevant procedures or documents supporting the product realization.

6.3.2 the identified infrastructure is provided tracked and maintained so as to ensure availability and satisfactory performance of work related to quality.

6.4 Work environment

6.4.1 Avnet Asia Warehouse Operations activities require an Electrostatic Discharge (ESD), temperature and humidity controlled environment to achieve conformity to product requirements.

6.4.2 the work environment needed is managed through scheduled monitoring and preventive maintenance checks with records maintained.

7.0 PRODUCT REALIZATION

7.1 Planning of realization processes

7.1.1 The Warehouse Operations plans and develops the processes needed for product realization and documents the planning output as a quality plan. The quality plan incorporates or references relevant requirements of the other processes of the quality management system.


7.1.2 the quality plan includes the following:

- a) Quality objective/purpose of each process, features and requirements for the product including those which contain a subjective element;
- b) Identification for acquisition, preparation, implementation and set up of compatible production processes, (including inspection and test equipment), other production processes, applicable documentation for processes, inspection and testing, resources such as work space, equipment, fixtures, work environment, and personnel competency needed to achieve the required product quality for the specific to the product;
- c) Identification of required / suitable verification, validation, monitoring, quality control, inspection and test activities, techniques and new instrumentation standards for product acceptability at appropriate stages in the realization of product specific to the product and the criteria for product acceptance;
- d) Records needed to provide evidence that the realization processes and resulting product meet requirements.

7.2 Customer-related processes

7.2.1 Determination of requirements related to the product

- a) Avnet Asia Warehouse Operations serves Avnet Asia Sales and Marketing Division which is an internal customer responding to their orders specified in the material resource planning schedule requirement as received from the company's network.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

- b) Customer requirement identification - Avnet Asia Sales and Marketing Division requires customer orders are fulfilled by appropriately storing components purchased by them, pick when an order is received and issued to the operation, pack with identification into required packed quantities and arrange for deliveries to customer locations.

The Warehouse Operations do not interface with the end customer on orders except for arrangement of deliveries to them.

- c) Requirements not stated by the customer but necessary for specified or intended use, where known - As some electronics components are susceptible to ESD damage and moisture absorption, ESD protection and moisture control is practiced in the Warehouse and Distribution Operations.
- d) There is no applicable statutory and regulatory requirement to the product for activities performed by the Warehouse Operations however to satisfactorily deliver products to customer, regulations related to import & export of goods are being complied through the use of competent forwarding agents.
- e) Any additional requirement determined by the Warehouse Operations or from customer for specific product or order will be stated in the pick slip for compliance.

7.2.2 Review of requirements related to the product

- a) Upon receiving an order from Avnet Asia Sales and Marketing Division, a review is performed by Planning Coordinator to ensure that:
- i. Only orders of customer-approved parts are accepted and available in stock.
 - ii. Any discrepancies in orders received are resolved with Avnet Asia Sales and Marketing Division.
- b) Records of order review and schedule or resolution of actions arising from the review are maintained.
- c) Undocumented orders will be confirmed of the requirements by email or fax by the planning coordinator.
- d) When a change to a product requirement is received a revised pick slip will be printed and product repacked to the revised pick slip if packing has commenced.

7.2.3 Customer Communications

The Warehouse Operations communicates effectively arrangements with Avnet Asia Sales and Marketing Division or user customer when required through email, faxes or telephone call in relation to:

- a) Products ordered,
- b) Inquiries, contracts or order handling, including amendments, and
- c) Customer feedback, including customer complaints. In the case of customer complaints this will be handled according to QMSP 8.


7.3 Designs and Development

7.3.1 Avnet Asia Warehouse Operations provides Warehouse and Distribution service of off-the-shelf goods stocked in the warehouse only. Thus, this requirement is not applicable as there is no design activity involved in such service.

7.4 Purchasing

7.4.1 Purchasing control

- a) Avnet Warehouse Operations ensures that purchased product and/or services conforms to purchase requirements specified, controlling suppliers and supplies by evaluation, selection and periodical review of suppliers of their ability to supply products that meets quality requirements including quality system and any specific quality assurance requirements. Criteria is based on the satisfactory quality audit reports of quality management system implementation or 3rd party certified quality management system and/or quality records of the previously demonstrated capability, supplier's approval by customer, performance history of acceptable quality performance.
- b) This control is dependent upon the type of products and it's on subsequent product realization of the final product
- d) Records of supplier's evaluations and any necessary actions arising from the evaluation are maintained.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

7.4.2 Purchasing information

- a) Purchase documents are reviewed, approved before issuing to suppliers to ensure that purchased information clearly describing the product to be ordered such as:
 - i) Product or service description, as appropriate,
 - ii) Requirements specified in quality survey/audit that included quality management system, approval or qualification of product, process/process equipment, procedures/inspection instructions, and specific personnel qualification requirements as applicable and needed by Avnet Asia Warehouse Operations.
- b) For standard off-the-shelf product, which have been approved and included into the Approved vendor list, purchases ordered by electronic media are reviewed by buyer for correct part required prior to release.

7.4.3 Verification of purchased product

- a) Externally purchased products are verified to ensure specified purchase requirements are met.
- b) When Avnet Asia Warehouse Operations or her customer requires to verify purchased product/services at the supplier/subcontractor, Avnet Asia 's purchasing documents specify these verification arrangements and the method for release of product in the purchase order or fax or email to suppliers.

7.5 Production and service provision

7.5.1 Control of production and service provision

Avnet Asia Warehouse Operations provides Warehouse and Distribution service and are carried out under controlled conditions as follows;

- a) Controlled work instructions, quality plans defining the manner of operation and acceptability criteria of the product characteristics,
- b) Use of suitable and approved processes and equipment availability
- c) Use of monitoring and measuring devices in suitable work environment,
- d) Monitoring and measurement process parameters and product characteristics (if appropriate),
- e) Suitable maintenance of equipment.
- f) Release of acceptable product for storage or delivery to customer.

The products delivered to customers are non-serviceable, thus after sales servicing is not applicable.

7.5.2 Validation of processes for production and service provision


The environment in the warehouse for storage is monitored and validated to comply with required specifications and practices to ensure product integrity. No other validation will be required. Affected parts and delivered parts will be reviewed should the validation results fail to meet requirements.

7.5.3 Identification and Traceability

- a) Avnet Asia Warehouse Operations identify the product by means of labels and/or pick slip, and Delivery orders accompanying the product indicating identity, customer, lot or batch number and status of measurement and monitoring results to requirements. Nonconforming material is positively identified and segregated when encountered, for control of nonconforming product to prevent unintended use or delivery.
- b) The product Traceability is controlled and recorded of its unique identification in the pick slip, system, Delivery orders accompanying the product.

7.5.4 Customer property

- a) Avnet Asia Warehouse and Distribution Operations exercises care with customer property including intellectual property and its confidentiality while under the Warehouse Operations control. Customer properties include goods purchased by Avnet Asia Sales and Marketing and end customer goods.
- b) Any customer property that is lost, damaged or unsuitable for use is recorded and reported to the management for resolution with customer.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

7.5.5 Preservation of product

Avnet Asia Warehouse Operations preserves conformity of products or its constituent parts during internal processing and delivery to the intended destination by adequate identification, handling, packaging, storage and protection to prevent damages or deterioration due to mishandling, environmental effects or E.S.D.

7.6 Control of monitoring and measuring devices

7.6.1 Avnet Asia Warehouse Operations determine the monitoring and measurement to be undertaken appropriate devices needed (based on function, range, accuracy and precision that is consistent with the monitoring and measurement requirements) to provide evidence of conformity of product to determined requirements.

7.6.2 In order to ensure valid results, measuring equipment is

- a) Calibrated (adjusted or re-adjusted as necessary) or verified at specified intervals, or prior to use, against certified measurement standards traceable to international or national measurement standards or in accordance to internal calibration instructions for each equipment type defining frequency of checks, check method and environment, acceptance criteria and the action to be taken when results are unsatisfactory;
- b) Identified to enable the calibration status to be determined;
- c) Safeguarded from adjustments that would invalidate the measurement result after the calibration or its verification;
- d) Protected from damage and deterioration during handling, maintenance and storage.

7.6.3 In addition, when the equipment is found not to conform to requirements, the Warehouse Operations assesses and record the validity of the previous measuring results and takes appropriate action on the equipment and any product affected. Records of results of calibration and verification are maintained.

8.0 MEASUREMENTS, ANALYSIS AND IMPROVEMENT

8.1 General

Avnet Asia Warehouse Operations plans and implements the monitoring, measurement, analysis and improvement of processes needed that includes determination of applicable methods and statistical techniques where appropriate to;

- a) Demonstrate conformity of the product,
- b) Ensure conformity of the quality management system, and
- c) Continually improve the effectiveness of the quality management system.


8.2 Monitoring and measurement

8.2.1 Customer satisfaction

- a) Avnet Asia Warehouse Operations monitors information relating to customers' perception and satisfaction of customers' requirements through customer satisfaction surveys as a measurement of performance of the quality management system.

8.2.2 Internal audit

- a) Avnet Asia Warehouse Operations establishes and maintains a documented procedure QMSP 8 that defines responsibilities and requirements for audit planning, conducting, criteria, scope, frequency, methods, reporting results and maintaining records.
- b) The internal audit is planned at least semiannually to determine the quality management system's conformity to planned arrangements established, requirements of ISO 9001:2000 Standard, is effectively implemented and maintained. Additional Internal audit may also be scheduled basis on status and importance of processes and areas to be audited as well as the results of previous audits.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

- c) Auditors selected do not audit their own work and conducts the audit ensuring objectivity and impartiality.
- d) Audits result is reported to responsible area management being audited who ensures that actions are taken within agreed times to eliminate audit nonconformity detected and their causes.
- e) Follow-up audit activity includes verification of the actions taken effectiveness and report of the verification result.
- f) The internal audit result is summarized into report for inclusion into the Management Review.

8.2.3 Monitoring and measurement of processes

- a) Avnet Asia Warehouse Operations identifies objectives for key quality management system processes. Suitable methods are applied to monitor, measure, report and demonstrate their performances to achieve planned results for management review. When planned results are not achieved, continual improvement is planned and implemented, or appropriate correction taken to ensure product conformity.

8.2.4 Monitoring and measurement of product

- a) Product characteristics are monitored and measured at various stages of the product realization process using methods; statistical techniques as identified in the quality plan to verify that product requirements are met.
- b) Monitoring and measurement records are maintained indicating the person authorizing release of product and evidence of conformity with the acceptance criteria. Product is released to the next process or for delivery only when all requirements of the quality plan had been satisfactorily completed, unless otherwise approved by the QA Manager and, where applicable, by the customer.

8.3 Control of nonconforming product

8.3.1 any product/material not conforming to requirements is identified and controlled to prevent its unintended use or delivery by segregating from acceptable material. The controls and related responsibilities and authorities for dealing with product nonconformity are documented in QMSP 8. The product nonconformity is dealt by;

- a) Taking action to eliminate the detected product nonconformity (identify, document, segregate, evaluate & disposition to rework to meet the product requirements or reject or scrap, notify to concerned functions for appropriate action).
- b) Authorizing its use, release or acceptance under concession by QA Manager and customer if required by contract;
- c) By taking action to preclude its original intended use (identify, document, segregate, or for alternative applications).

8.3.2 the nonconformity and any subsequent actions taken, including concessions obtained, is recorded and maintained.


8.3.3 Repair/rework nonconforming product is re-inspected to demonstrate conformity to the product requirements.

8.3.4 when nonconforming product is detected after delivery or use has started, appropriate action to the effects, or potential effects, of the nonconformity is taken.

8.4 Analysis of data

8.4.1 Avnet Asia Warehouse Operations determines, collects and analyzes appropriate data into reports for management review to demonstrate the suitability, effectiveness and the continual improvement of the quality management system as appropriate. The data is generated from resulting information of monitoring and measurement of product and processes related to;

- a) Customer satisfaction
- b) Conformance to product requirements;
- c) Characteristics (control, verify product and process characteristics with appropriate statistical techniques as in quality plans), and trends of processes and products including opportunities for preventive action, and
- d) Suppliers.

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

8.5 Improvement

8.5.1 continual improvement


- a) Avnet Asia Warehouse Operations continually improves the quality management system effectiveness as identified through use of analysis of data for quality objectives, audit results, corrective or preventive actions, changes needed to the quality system as a result of applicable external inputs received and management review as appropriate.

8.5.2 Corrective action

- a) Avnet Asia Warehouse and Distribution Operations takes appropriate corrective action to eliminate the cause of product nonconformity (including customer complaint) and to prevent recurrence.
- b) QMSP 8 establishes the requirement and procedure for corrective action that includes;
- i) Reviewing nonconformity (including customer complaints),
 - ii) Determining the causes of nonconformity,
 - iii) Evaluating the need for actions to ensure that nonconformity do not recur,
 - iv) Determining and implementing action needed,
 - v) Records of the results of action taken and
 - vi) Reviewing corrective action taken has been handled effectively.

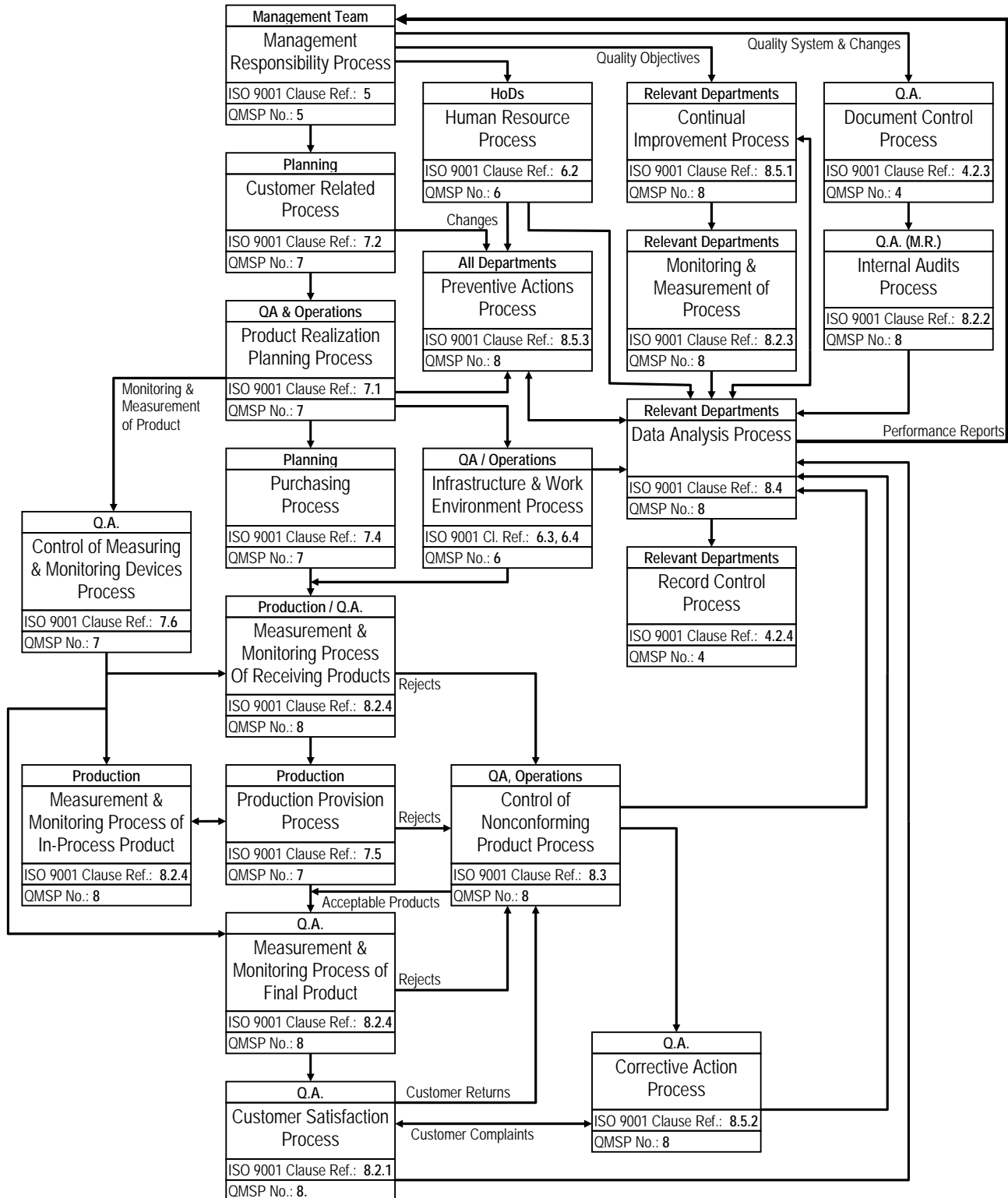
8.5.3 Preventive action


- a) Avnet Asia Warehouse Operations detects potential nonconformity to the quality management system and identifies potential causes, and takes preventive actions appropriate to the effects of the potential problems to prevent its occurrence.
- b) QMSP 8 establishes the procedure for preventive action that includes;
- i) Determination of potential nonconformity and their potential causes that may arise due to changes affecting the quality management system, new products, analysis of processes or product quality failures or customer complaints for application to new products or processes, quality audit results, concessions.
 - ii) Evaluate the need for action to prevent occurrence of nonconformity,
 - iii) Determine and implement action needed,
 - iv) Record results of action taken,
 - v) Review preventive action taken.

| | | | | |
|---|---|----------------------------|--|---|
|  | Title: Quality Manual | Doc. No. QM 5001 | Date of Issue: Sep 30 2004 | QA Stamp |
| | Department or Process: Management | Revision 0 | Change Effective Date: Sep 30 2004 | Confidentiality Business Use Only |

Annex A:

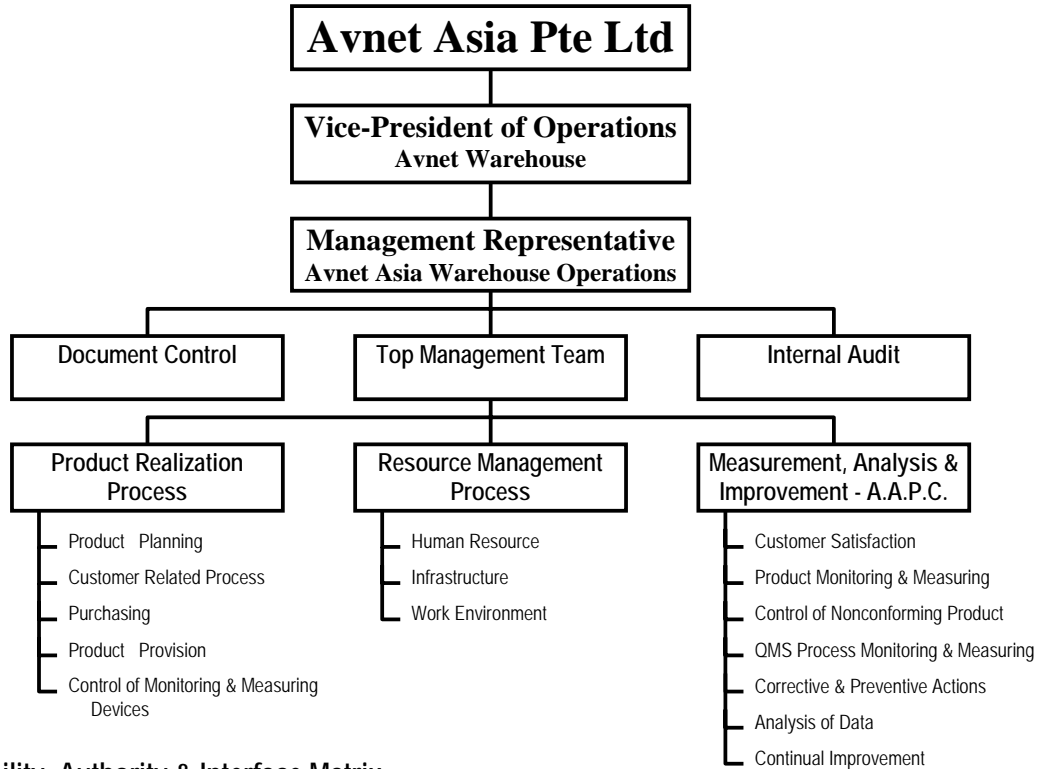
Avnet Asia Avnet Warehouse Quality Management System Process Plan



| | | | | |
|---|---|----------------------------|--|---|
|  | Title: Quality Manual | Doc. No. QM 5001 | Date of Issue: Sep 30 2004 | QA Stamp |
| | Department or Process: Management | Revision 0 | Change Effective Date: Sep 30 2004 | Confidentiality Business Use Only |

Annex B


Quality Management System Organization Structure



Responsibility, Authority & Interface Matrix

| ISO 9000 Cl. No. | ISO 9001: 2000 Clause Description | Q.M. Para. No. | QMSP No. | Operations Director | M.R. | Q.A. | Operations | Planning | |
|------------------|---|----------------|----------|---------------------|------|------|------------|----------|--|
| 4 | Quality Management System | 4 | 4 | | | | | | |
| 4.2.3 | Document Control | 4.2.3 | 4 | | M | S | S | S | |
| 4.2.4 | Control of Quality Records | 4.2.4 | 4 | | M | M | M | M | |
| S | Management Responsibility | 5 | 5 | S | M | M | M | S | |
| 6 | Resources management | 6 | 6 | | | | | | |
| 6.2 | Human Resource Management | 6.2 | 6 | | S | S | M | S | |
| 6.3 | Infrastructure Management | 6.3 | 6 | | | S | M | | |
| 6.4 | Work Environment Management | 6.4 | 6 | | | S | M | | |
| 7 | Product Realization Processes | 7 | 7 | | | | | | |
| 7.1 | Product Realization Planning | 7.1 | 7 | | | M | M | | |
| 7.2 | Customer Related Process | 7.2 | 7 | | | | S | M | |
| 7.3 | Design and Development | 7.3 | N. A. | | | | | | |
| 7.4 | Purchasing | 7.4 | 7 | | | S | | M | |
| 7.5 | Product & Service Provision | 7.5 | 7 | | | S | M | | |
| 7.6 | Control of Monitoring & Measuring Devices | 7.6 | 7 | | | | M | | |
| 8 | Measurement Analysis & Improvement | 8 | 8 | | | | | | |
| 8.2.1 | Customer Satisfaction | 8.2.1 | 8 | | S | | | M | |
| 8.2.2 | Internal Audit | 8.2.2 | 8 | | | M | | | |
| 8.2.3 | Monitoring & Measurement of QMS Process | 8.2.3 | 8 | | M | M | M | M | |
| 8.2.4 | Monitoring & Measurement of Product | 8.2.4 | 8 | | | S | M | | |
| 8.3 | Control of Nonconforming Product | 8.3 | 8 | | | M | M | | |
| 8.4 | Analysis of Data | 8.4 | 8 | | M | M | M | M | |
| 8.5.1 | Corrective Action | 8.5.1 | 8 | | | M | S | | |
| 8.5.2 | Preventive Action | 8.5.2 | 8 | | M | M | M | M | |
| 8.5.3 | Continual Improvement | 8.5.3 | 8 | | M | S | M | S | |

Legend: M = Main Role (Plan, Evaluate, Approve, Change, Report, Coordinate, Implement, Corrective Action)
S = Support Role (Implement, Record)

| | | | | |
|---|--|-----------------------------------|---|--|
|  | <i>Title:</i> Quality Manual | <i>Doc. No.</i> QM 5001 | <i>Date of Issue:</i> Sep 30 2004 | <i>QA Stamp</i> |
| | <i>Department or Process:</i> Management | <i>Revision</i> 0 | <i>Change Effective Date:</i> Sep 30 2004 | <i>Confidentiality</i> Business Use Only |

Annex C

Quality Responsibility, Authority & Required Competency

| # | Level (Job Position) | Quality Responsibility | Quality Authority | Min. Competency (Education/Training/Experience/Skill) |
|----|--|--|--|---|
| 1. | Head of Organization (Director of Warehouse Operations) | <ul style="list-style-type: none"> Overall responsibility for Warehouse & Avnet Warehouse Operation's performance, operations control & P&L (Profit & Loss). | <ul style="list-style-type: none"> Approval of resources for Warehouse & Avnet Warehouse Operations, infrastructure, human resources & finance. | <ul style="list-style-type: none"> Appropriate tertiary education. Management experience on warehouse and production operations. Familiar with business. |
| 2. | Head of Department (Regional QA Manager & Management Representative) | <ul style="list-style-type: none"> Establish, implement & maintain quality management system processes meeting ISO 9001:2000 & customer requirements. Report quality management system performance & any needed improvement to Top Management. Promote awareness of customer requirements throughout Avnet Warehouse. Liaison with external parties on matters relating to the quality management system & product quality. Coordinates Internal Quality Audit Activities Facilitate and prepare management review minute & distribute to relevant staff for required follow up actions. Consult, coordinate and support on matters related to product & service quality. Evaluate & dispose nonconforming product. Control of quality documents, data and records Coordinate & assist in Continual Improvement, Corrective & Preventive Action Annual Quality Planning & Budget for Company and Department. Evaluation of Supporting materials and suppliers & maintain Approved Vendor List. | <ul style="list-style-type: none"> Authorize conduct of Quality Audits Authorize documents and procedures related to Q.M.S. Represent the company on Quality management system matters to customers & 3rd party auditors. Review & approve appropriate course of actions on all quality matters (within Avnet or with suppliers or customers). Approve QMS, Product & Service quality document & data. Evaluate and dispose non-conforming product from production or field return. Authorize nonconforming product return and recall from the field. Stop delivery when product nonconformity to customer requirements. Approve Purchases on budgeted quality products or services. Approve supporting material suppliers. Handle product Quality matters with customers. | <ul style="list-style-type: none"> Tertiary education in technical discipline. Familiar with Quality management System, Quality Methodology, Statistical techniques. Knowledge of customers' requirements Conduct Quality Audits Knowledgeable and skillful on all requirements of ISO 9001:2000 Document Control Procedures. Knowledgeable & experienced on product, & quality processing Knowledge on ESD and controls. |
| 3. | Head of Departments | <ul style="list-style-type: none"> Provision & Management of Resources for Facilities & Product Realization. Coordinate product quality planning; document, implement & quality of new Products & Processes. Provide required inputs & participate in Management Reviews. Identify & Coordinates Process Improvements, Corrective or Preventive Actions required. Manage Orders received & delivery schedule within agreed cycle time. | <ul style="list-style-type: none"> Approve purchases of hard wares, materials & services to enable product realization. Approve installation set up. | <ul style="list-style-type: none"> Tertiary education in technical discipline. Knowledge of customers' requirements Knowledgeable, experienced & skillful on product, product processing & relevant requirements of ISO 9001:2000. Knowledge on ESD and controls. Skill in operations management to meet quality and delivery objectives. |
| 4. | Executive | <ul style="list-style-type: none"> Training support on warehousing matters Support for product realization, Measurement, Analysis and Improvement, calibration & maintenance of equipment, work environment & infrastructure Support to meet Quality Objectives. | <ul style="list-style-type: none"> Approve work procedures for implementation. Stop delivery for correction and/or corrective action when quality requirement is not met. | <ul style="list-style-type: none"> Tertiary education in technical discipline. Knowledgeable, experienced & skillful on product, product processing. Knowledge on ESD and controls. Knowledge on relevant requirements of ISO 9001:2000 & related procedures Knowledge & use of SAP MRP Software and capabilities. |
| 5. | Non Executive | <ul style="list-style-type: none"> Production & Materials planning, schedule tracking, materials withdrawal from Avnet Warehouse. Purchase of supporting materials for production. Interface with Avnet Corporate Sales to review orders and quotations. | <ul style="list-style-type: none"> Material Withdrawal from Avnet Warehouse for production. Receive of purchased materials. Accept orders within Avnet Warehouses Capability and Capacity documented. | <ul style="list-style-type: none"> Tertiary education. Knowledge & use of SAP MRP Software and capabilities. Relevant Quality System procedures. |
| 6. | Worker/Inspector (Operator, Inspector, Storekeepers) | <ul style="list-style-type: none"> Perform production or inspection processes in accordance to work instructions trained to them. Complete all necessary records by them after each completion of their production work. Maintain work environment during and after performing their work. Report all problems & nonconformance encountered to their superiors for investigation & corrective action. | <ul style="list-style-type: none"> Reject non-conforming products, segregating and identifying the rejected products for Engineering or QA review. Transfer acceptable products to subsequent operation after completion of required forms. Shut down production process for corrective action when serious level of nonconformance is encountered. | <ul style="list-style-type: none"> At least secondary education. Production process & device handling Work duties & responsibilities Relevant ISO 9000 procedures, instruction and forms to use. ESD and clean room practices. |