

Quality Manual

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LTR	DESCRIPTION	ECO	DATE	APPROVED
Α	INITIAL RELEASE		2/13/98	MLG
В	EXECUTIVE MANAGEMENT STRUCTURE UPDATED	EC100094	7/31/98	MLG
	19.0 SERVICING, DESCRIPTION UPDATED TO REFLECT CURRENT BUSINESS PRACTICES			
	KAP INDEX UPDATED TO REFLECT CURRENT PROCESS OWNERS			
_	KAP002 "PURCHASE PART DEFECT RESOLUTION" ADDED TO KAP INDEX			
C	ADDED QMT MEMBERS	EC100180	6/7/99	MLG
	DELETED APPENDIX A			
	DELETED ALL SPECIFIC REFERENCES TO KAPS AND THEIR ASSOCIATED AREAS. SECTION 2.2			
	DIRECTS THE READER TO THE WPG ISO9000 INTRANET SITE.			
	1.0) WPG OPERATES 2 SITES: PA AND MILPITAS			
	2.1.2) DELETED REFERENCES TO SPECIFIC TITLES AND THEIR RESPONSIBILITIES.			
D	2.2) REFERENCES THE WPG ISO9000 INTRANET SITE FOR ALL KAPS.  CHANGED ALL REFERENCES FROM WIRELESS PRODUCTS GROUP TO WJ COMMUNICATIONS	EC100494	12/19/00	AG
D	INC.	EC100494	12/19/00	AG
	INC. CHANGED TO REFLECT UPDATED PROCEDURES.			
	CHANGED OMT MEMBERS TO REFLECT ORGANIZATIONAL CHANGES.			
	ADDED APPENDIX A. ADDED SPECIFIC REFERENCES TO KAPS.			
Е	REMOVE SERVICING ELEMENT AS A REQUIREMENT. ADD REFERENCE TO THE "EMPLOYEE	EC100495	1/4/01	AG
L	DEVELOPMENT PLAN" AND PERFORMANCE REVIEWS	LC100473	1/4/01	AG
F	UPDATE KAP OWNERS ON APPENDIX A	EC100588	4/25/01	
G	CHANGE INDIVIDUALS' NAMES TO DEPARTMENT NAMES ON APPENDIX A, OTHER UPDATES	EC100725	11/26/01	MJC
Н	ADD FURTHER DETAIL ON ROLES OF MANAGEMENT AND MANAGEMENT REPRESENTATIVE	EC100789	1/7/02	FEH
	PER ISO9001:2000. ADDED KAP'S 080 THROUGH 082. ADD NOTE FOR DOCUMENT CONTROL TO	Leiouros	177702	1211
	HAVE WEBSITE UPDATED AS DOCUMENT IS UPDATED.			
I	ADDED KAP083, ESD CONTROL	EC100818	4/15/02	MLG
J	ADDED KAP084, SLIGHT CHANGE TO QUALITY POLICY TO AGREE WITH ALL POSTED	EC100853	6/11/02	MLG
	DOCUMENTS – REMOVED "CUSTOMER SATISFACTION IS THE RESPONSIBILITY OF ALL			
	EMPLOYEES"			
K	CHANGED QUALITY POLICY, OBSOLETED KAP 081, ASSEMBLY PROCESS ENGINEERING,	EC100878	10/9/02	MJC
	CHANGED DESCRIPTION OF WJ BUSINESS FOCUS IN INTRODUCTION			
L	UPDATED TO SHOW NEW KAPS85, 86 & 87 AND OBSOLETED KAPS 74 & 78	EC100903	12/9/02	MJC
M	UPDATED TO OBSOLETE KAP075, ADD FOURTH QUALITY OBJECTIVE	EC100905	02/27/03	MJC
N	REWRITE FOR ISO9001:2000	DCN101003	5/15/03	MJC
О	ADDED PROCESS INTERACTIONS CHARTS, UPDATED Q POLICY TO ADD COMMITMENT TO	DCN101020	6/2/03	MJC
	COMPLY WITH REQUIREMENTS, ADDED KAP089, CUSTOMER COMMUNICATION			
P	REMOVED COMMUNICATION FROM QUALITY OBJECTIVES, CHANGED SPECIAL PROCESSES,	DCN101073	8/27/03	MJC
	7.5.2 ,TO N/A, ADDED KAP092, PRODUCT RECALL			

Notice to Document Control: Addition to or deletion of KAP's from this document must be forwarded to the ISO9001 intranet webmaster and the internet webmaster for website updating.

APPROVALS				wj comminications
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SR VP, Semiconductor Division	X	T. R. Kritzer	2/13/98	QUALITY ASSURANCE INSTRUCTIONS
VP, Integrated Product Operations	X	M. L. Gabitass	2/13/98	TITLE
VP, Semiconductor Operations	X	A. J. Graven	6/07/99	Quality Manual
VP, Sales and Customer Service	X	M. Lee	5/18/00	WJ Communications, Inc.
Director, HR	X	N.B. Arrouzet	2/13/98	
VP, Marketing	X	J. Mravca	2/13/98	
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## 1 INTRODUCTION

WJ Communications, Inc. is a leading RF semiconductor company focusing on the design and manufacture of high-quality devices and multi-chip modules (MCM's) for telecommunications systems worldwide. WJ's highly reliable amplifier, mixer, RF IC, and MCM products are used to transmit and receive signals, enabling current and next generation wireless and wireline services.

#### 2 SCOPE

This quality manual applies to all products designed and/or manufactured at WJ Communications, or at qualified suppliers' sites and governs our practices and processes. The quality manual is written in accordance with the ISO9001:2000 standard.

#### 3 **DEFINITIONS**

CAR - Corrective Action Request

PAR - Preventive Action Request

KAP – Key Activity Procedure

QMS – Quality Management System

QMT – Quality Management Team

## 4 QUALITY MANAGEMENT SYSTEM

## 4.1 General Requirements

WJ Communications has established a Quality Management System (QMS) in order to meet our Quality Policy and Objectives and to ensure that our products conform to internal, external, customer and ISO9001 requirements. The Quality Management System is regularly reviewed for its effectiveness and opportunities for improvement are sought on a regular basis.

Management has identified and maintains Key Activity Processes (KAPs) that govern critical functions within the company. WJ ensures that the resources required to maintain the Quality Management System are made available.

## 4.2 **Document Requirements**

#### 4.2.1 General

WJ Communications has documented the Quality Management System through this Quality Manual, Key Activity Procedures, Work Instructions, and the Quality Policy and Objectives. These documents are available to employees through the WJ Communications intranet site and are maintained at the work site as appropriate.

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## 4.2.2 Quality Manual

The purpose of this quality manual is to document WJ's quality assurance system and the policies and procedures WJ uses to ensure the quality and the timely delivery of the products it designs and manufactures. The quality manual contains the general requirements for a quality management system following the guidelines of ISO9001:2000. This quality manual references Key Activity Procedures (KAPs), and where applicable, the KAPs reference records and work instructions that provide more detailed instructions.

Interactions between the processes of the quality management system are described in Appendices C and D.

#### 4.2.3 Control of Documents

Manufacturing drawings, specifications, procedures, and software that are relevant to the quality system are controlled by documented procedures.

The procedures outline the following requirements:

- Proper document review prior to issue
- Document review and approval for changes
- Current document revisions available at point of use
- Visible and verifiable revision levels on documents
- Removal of obsolete documents from areas of use and issue unless clearly identified as obsolete when retained for history

#### References:

KAP023: Document Control Procedure

KAP044: Shared and Local Control of Documentation

### 4.2.4 Control of Records

Quality records demonstrating conformance achieved to the specified requirements and effective operation of the quality system are maintained. Quality records shall be retrievable and legible. Records are stored in a suitable environment to prevent damage and deterioration. The identification and disposition of quality records, as well as periods of retention are defined in the KAPs.

#### 5 MANAGEMENT RESPONSIBILITY

## 5.1 Management Commitment

WJ Communications' management has committed to producing products that conform to internal and external requirements based on the Quality Management System. Management has established and reviews the Quality Policy and Objectives and performance to those objectives. Management communicates the importance of meeting customer and other requirements through regular communication within departments, through Quarterly Employee Communication Meetings and through a monthly quality report.

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## 5.2 Customer focus

WJ Communications' management ensures that customer requirements are met with the goal of achieving customer satisfaction. Customer needs and expectations are determined and converted into requirements as part of the marketing and contract review processes.

Documented procedures are established and maintained by Customer Service and Business Managers when purchase orders, contracts, customer requirements, or amendments are received. These procedures ensure that the requirements are adequately defined and documented and that exceptions and clarifications are identified and resolved.

Customer Service surveys customers to solicit information on their satisfaction regarding WJ's products and services. Customer feedback is collected through sales channels and by conversations with WJ customer service personnel.

#### References:

KAP004: Order Entry and Administration

KAP021: Customer Inquiry/Quote

KAP028: Contract Review

KAP086: Gate Review for New Products

## 5.3 Quality Policy

WJ Communications has established a quality policy that is appropriate for the purpose of our organization. It demonstrates a commitment to comply with requirements and to continually improve the quality system. It provides a framework for establishing quality objectives. The quality policy is reviewed by WJ management for continued suitability.

## WJ Communications' Quality Policy:

WJ Communications is committed to satisfying customers by providing quality products, complying with all requirements, and continually improving our quality management system.

## 5.4 Planning

## 5.4.1 Quality Objectives

WJ has established quality objectives for the company that are measurable and attainable. The quality objectives provide a focus for the company and are the target for continual improvement. WJ's Quality Management System has been established to ensure that all employees are equipped with the knowledge, direction, and resources necessary to meet WJ's quality system requirements.

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## WJ Communications' Quality Objectives:

- Ensure customer satisfaction by delivering quality products and services when and how customers want them
- Comply with internal, external and ISO9001 requirements.
- Continually improve processes to enhance product quality and lower business costs

## 5.4.2 Quality Management System Planning

WJ management ensures that the Quality Manual, Key Activity Procedures, and Work Instructions are adequate to meet the changing needs of the company and its customers. Planning of the QMS is carried out in order to achieve the objectives in 4.1 as well as the quality objectives. The integrity of the quality system is maintained when changes are planned and implemented through:

- Customer Contract Reviews
- Product Development Process and Project Gate Reviews
- Quality System Reviews
- Supplier Management
- Document Control

## 5.5 Responsibility, Authority, and Communication

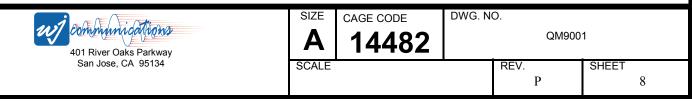
## 5.5.1 Responsibility and Authority

Responsibilities and authorities have been established to ensure effective implementation of the Quality Management System. The primary method of communicating responsibility and authority to relevant levels of the organization is through the KAP documentation.

The Quality Management Team (QMT) consists of management staff responsible for functional areas of the Company. The QMT ensures that WJ's quality system is understood, implemented and maintained to meet the ISO9001 requirements. The QMT is responsible for assuring the Quality Manual is an accurate representation of WJ's quality system and business operations, with an aim to continuously improve all processes. It is also responsible for effectively communicating the quality policy throughout the company. The QMT is responsible for determining the necessary priorities and resources to achieve the quality objectives.

Managers and supervisors will ensure that personnel assigned to manage, perform and verify work that affects quality are empowered to initiate corrective and preventive action, document and record non-conformities, and implement solutions. Managers and Supervisors are responsible for driving their organizations to meet the goals and objectives as defined by the QMT. They are also responsible for ensuring that procedures and work instructions are maintained, ensuring that employees have been trained and have the appropriate tools needed to perform their operations.

Human Resources maintains a Company organization chart, which outlines the organizations.



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A functional organization chart, Quality Management Systems Interactions, and WJ Communications Process Interaction flows are attached as appendices.

## 5.5.2 Management Representative

All members of the QMT are management representatives. The Management Representatives establish, implement and maintain the necessary processes for the quality management system. The Management Representatives report to top management on performance of the quality management system as well as on efforts and needs for improvement. Management representatives are also responsible for promoting awareness of customer requirements throughout the organization. This includes representing the company to external organizations on matters regarding the quality management system. The Management Representatives are responsible for communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements.

## 5.5.3 Internal Communication

Quality System requirements are communicated throughout the organization. Key Activity Procedures and Work Instructions are documented and are available to employees. Management communicates performance to quality objectives to employees through group employee meetings, email, monthly reports distributed and posted throughout the company, and department meetings.

#### 5.6 Management Review

#### 5.6.1 General

The QMT meets quarterly as a minimum, or more often as needed to establish quality objectives, review key performance metrics, such as internal audit results, corrective and preventive action results, action items from the previous meetings, and performance against goals and objectives. The QMT presents quality management system performance quarterly to WJ top management.

Reference: KAP060, Management Review

## 5.6.2 Review Input

Review inputs include a review of performance against goals and objectives for process performance and product conformance, a review of internal and external audit findings, a review of the status of corrective and preventive actions, a review of customer issues and customer satisfaction survey results, recommendations for improvements, a review of status changes that could affect the quality management system, and a review of the quality goals and objectives.

## 5.6.3 Review Output

Review outputs include opportunities for improvements to the effectiveness of the Quality System, improvements to the product related to customer requirements, and resources needed to maintain the quality system. Action items are assigned and reviewed at subsequent meetings.

#### 6 RESOURCE MANAGEMENT

### 6.1 Provision of Resources

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Management determines and provides resources needed to maintain the quality management system, to improve its effectiveness, and to ensure customer satisfaction. An annual operating plan is established which defines resources, materials, and equipment needed to accomplish the forecasted production schedule. The resource plan is reviewed and updated as needed.

Resource planning is described in Appendix E.

## 6.2 Human Resources

#### 6.2.1 General

Personnel performing work affecting product quality are competent based on their past experience, education and training. Human Resources maintains job descriptions that call out requirements for education and experience that must be met before an individual is hired or promoted. Supervisors are responsible for monitoring employee performance to ensure that they are performing their job duties properly.

## 6.2.2 Competence, Awareness, and Training

WJ Communications has defined the requirements for personnel whose activities affect product quality. Applicants' skills and education are measured against job requirements. Employees' training needs are identified in the periodic performance reviews and are managed through an employee performance plan. WJ Management ensures that employees are aware of the importance of their activities and how they contribute to the Quality Objectives. Human Resources and the employee's direct supervisor are responsible for defining and maintaining records of education, training, skills and experience.

References:

KAP046: Recruiting

KAP061: Performance Reviews

KAP051: Training

KAP079: EH&S – Injury and Illness Prevention Program

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#### 6.3 Infrastructure

WJ provides and maintains its plant sites, workspaces, tools and equipment, and software to ensure conformity of products to requirements.

### References:

KAP084: Temp & Humidity Monitoring in River Oaks KAP088: Facilities Requirements - Milpitas Facility

KAP083: ESD Control

#### 6.4 Work Environment

WJ provides the work environment needed to produce products that conform to requirements.

#### References:

KAP084: Temp & Humidity Monitoring in River Oaks KAP088: Facilities Requirements - Milpitas Facility

KAP083: ESD Control

#### 7 PRODUCT REALIZATION

#### 7.1 Planning of Product Realization

Product realization is planned and controlled. The Gate Review Process defines the process by which new product development efforts are defined, released into engineering, and tracked through initial production. Records of the reviews are maintained.

Product quality objectives as well as required verification, validation, resources and monitoring are defined in the Product Development Process. Records are kept to show that the final product meets requirements.

## References:

KAP086: Gate Review Process

KAP015: Product Development Process

## 7.2 Customer-Related Processes

## 7.2.1 Determination of Requirements Related to the Product

Documented procedures are established and maintained by Customer Service and Business Managers to ensure that the requirements for product, delivery, and service are adequately defined and documented. Requirements not stated by the customer are considered, and exceptions and clarifications are identified and resolved.

#### References:

KAP004: Order Entry and Administration

KAP021: Customer Inquiry/Quote

KAP028: Contract Review

KAP087: Product Discontinuation Process KAP089: Customer Communication

## 7.2.2 Review of Requirements Related to the Product



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Order requirements are systematically reviewed and processed in accordance with customer requirements and documented procedures. If product requirements are changed, relevant documents are updated with the changes. Records are maintained.

#### References:

KAP004: Order Entry and Administration

KAP021: Customer Inquiry/Quote

KAP028: Contract Review

## 7.2.3 Customer Communication

WJ Communications has established effective methods for communicating with customers. WJ maintains a company website which provides customers with product datasheets as well as contact information for Customer Service and Applications Engineering. Customers are able to contact WJ's Customer Service and Applications Engineers for product information, inquiries, amendments, and feedback. Customer Service facilitates product returns for customers.

#### References:

KAP001: Field Return System KAP021: Customer Inquiry/Quote KAP085: New Product Launch KAP089: Customer Communication

## 7.3 Design and Development

## 7.3.1 Design and Development Planning

Documented procedures are established and maintained to verify that product design and development meets specified requirements. Development stages are documented and include project reviews, validation and verification requirements, and responsibilities for project assignments. Project plans are updated as needed.

## 7.3.2 Design and Development Inputs

Design and development inputs are recorded in the Product Requirement & Compliance Matrix. The inputs include functional and performance requirements as well as customer, statuary, regulatory and other requirements essential for design and development. The inputs are reviewed for adequacy and updated as needed. Records are maintained.

## 7.3.3 Design and Development Outputs

Design and development outputs are recorded in the Product Requirement & Compliance Matrix and in design review minutes. The outputs are reviewed to insure that they meet the input requirements. Design outputs include product acceptance criteria. Characteristics for safe operating conditions are included in the design outputs. The design outputs include information needed for purchasing, production, and other affected areas.

## 7.3.4 Design and Development Review

Documented reviews are planned and conducted throughout the product development process to determine how the product development is progressing and to ascertain if the product is ready to progress to the next stages of development. Participants are from cross-functional

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groups and are assigned actions as needed for the development to progress. Records of the reviews are maintained.

## 7.3.5 Design and Development Verification

Design verification testing is performed to demonstrate that the product outputs conform to design input requirements. Records are maintained.

Design and Development Validation

Product validation is conducted to demonstrate that final product meets the customer's expectations and/or the intended application. Records are maintained.

## 7.3.6 Control of Design and Development Changes

Design changes are identified and records are maintained. Affected personnel review the changes and the effect of the change on product in is evaluated. Product in process, in inventory and product already shipped to customers is considered in the evaluation.

## References:

KAP013: GaAs Process Engineering KAP015: Product Development Process KAP023: Document Control Procedure

KAP035: Test Engineering

## 7.4 Purchasing

## 7.4.1 Purchasing Process

Documented procedures are established and maintained to ensure that purchased product conforms to specification requirements. Suppliers are selected based on their ability to meet WJ's material and service requirements.

## References:

KAP006: Purchasing

KAP071: Supplier Approval, Qualification and Evaluation

## 7.4.2 Purchasing Information

Purchase orders are issued by Purchasing. Purchase documents are reviewed for adequacy of the specified requirements and are approved prior to issue. Records of relevant purchasing documents are retained for traceability, and can be found in the Oracle database.

## References:

KAP006: Purchasing

KAP071: Supplier Approval, Qualification and Evaluation

### 7.4.3 Verification of Purchased Product

Verification of purchased product is implemented by the affected manufacturing groups and incorporated into manufacturing processes. Incoming product is inspected and/or tested at WJ as defined and required in the work instructions. For products that are purchased from WJ's suppliers, incoming inspection and product test review processes have been established to verify the purchased product. Non-conforming purchased product is documented through the NCMR process.



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References:

KAP002: Non-Conforming Materials and Supplier Corrective Action

KAP040: Receiving

KAP071: Supplier Approval, Qualification and Evaluation

## 7.5 Production and Service Provision

### 7.5.1 Control of Production and Service Provision

WJ Communications plans and executes production processes under controlled conditions. Controlled conditions include product specifications, work instructions, suitable equipment, measuring equipment, and inspection and test criteria. Products are tested and inspected using documented specifications. Process requirements affecting quality are documented in KAPs, work instructions, drawings, and manufacturing travelers as required. Work instructions and production software are controlled through the document control process. Process equipment is maintained in order to produce conforming products.

#### References:

KAP011: Integrated Assembly Manufacturing

KAP012: GaAs Wafer Manufacturing KAP044: GaAs Device Package Test

## 7.5.2 Validation of Processes for Production and Service Provision

This element is not applicable. Process outputs are verified by subsequent monitoring or measurement.

## 7.5.3 Identification and Traceability

Documented procedures are established and maintained for the identification of incoming materials, work-in-process and shippable products. Incoming materials are identified by part number, purchase order number, and receiver number, while shippable products are uniquely identified with model number, date code, work order documentation and/or serial number. Field Returned Materials for refurbishing/rework are identified and segregated at all times from normal production.

The Oracle database and travelers maintained by the manufacturing areas provide traceability records for these products.

References:

KAP001: Field Return System

KAP011: Integrated Assembly Manufacturing

KAP040: Receiving

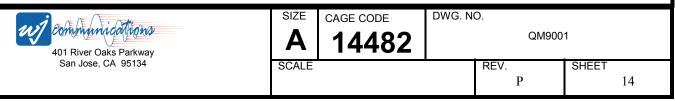
KAP044: GaAs Device Package Test

KAP080: Return Material Repair and Disposition

## 7.5.4 Customer Property

Customer property including test equipment is inspected when received and is tracked by the responsible management of the operation where property or equipment is to be used. Damaged or unsuitable product found at any stage of the process is reported to the Customer.

References:



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KAP082: Control of Customer Supplied Product

#### 7.5.5 Preservation of Product

Documented procedures are established and maintained to ensure adequate handling, storing, packaging, preserving, and distribution of products. Warehousing is under controlled conditions, where applicable, (physical and environmental) to: 1) preserve lot integrity, 2) protect product from damage, deterioration, and 3) prevent unauthorized release of shipment. Packaging is designed, evaluated and controlled to ensure product protection. The details of other handling and storage requirements can be found in work instructions within the applicable department.

### References:

KAP050: Inventory Receipts and Issues KAP062: Shipping/Finished Goods

KAP083: ESD Control

## 7.6 Control of Monitoring and Measuring Devices

WJ maintains documented procedures for the control and maintenance of test software, measuring and test equipment used to demonstrate product conformance to the specified requirements. WJ Communications may also contract the services of an outside vendor to calibrate and maintain WJ's inspection, measuring and test equipment.

All newly purchased equipment is routed to calibration for assessment and/or initial calibration. The system for calibration of test and measuring equipment is based upon ANSI/NCSL Z540-1 and is documented by the outside vendor. WJ employees using the equipment are responsible for ensuring that the equipment is calibrated as required.

### References:

KAP022: Calibration of Test and Measuring Equipment

## 8 MEASUREMENT, ANALYSIS AND IMPROVEMENT

#### 8.1 General

WJ defines, plans and implements the monitoring, measurement, analysis and improvement processes to ensure conformity of our products, to ensure conformity to the quality management system, and to continually improve the effectiveness of the QMS.

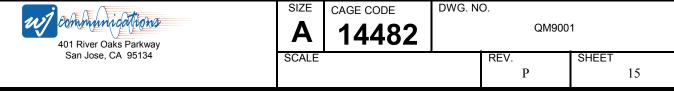
## 8.2 Monitoring and measurement

#### 8.2.1 Customer Satisfaction

WJ monitors customer perception through customer satisfaction surveys, which are administered and analyzed on a quarterly basis.

## 8.2.2 Internal Audit

WJ maintains an internal audit system to ensure the integrity of the quality system as well as conformity to the ISO9001 requirements. Internal audits are scheduled on a regular basis. A team independent of those having direct responsibility for the activity being audited carries out these audits. These results are reviewed, communicated to the area audited and non-



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conformances are entered into the Corrective and Preventive Action system. Follow-up audits shall verify and record the implementation and effectiveness of the corrective action taken.

References:

KAP024: Internal Audit System

## **8.2.3** Monitoring and Measurement of Processes

The quality management system processes are monitored and measured in order to ensure conformity of the product and effectiveness of the processes. When planned results are not achieved, corrective action is taken.

Reference: Various KAPs

## 8.2.4 Monitoring and Measurement of Product

The characteristics of the product are monitored and measured to ensure that product requirements have been met. Monitoring and measurement processing steps are planned and are called out in manufacturing documentation. Acceptance criteria are documented and maintained. Records are maintained to show release of product.

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References:

KAP012: GaAs Wafer Manufacturing

KAP011: Integrated Assembly Manufacturing KAP034: Corrective and Preventive Action

KAP045: Package Test

KAP080: Return Material Repair and Disposition

## 8.3 Control of Nonconforming Product

Procedures are established and maintained to handle the control of Non-conforming purchased materials and products. Non-conforming purchased material found in Receiving Inspection, Manufacturing Process, Finish Goods or field return is documented on a Non-conforming Materials Report (NCMR) and segregated for material review board (MRB). Records of the non-conformance, root cause analysis, and corrective and preventive actions are maintained in the Quality Records Database. In-process non-conforming product is dispositioned and documented by the manufacturing and engineering groups.

References:

KAP001: Field Return System

KAP006: Purchasing

KAP011: Integrated Assembly Manufacturing

KAP012: GaAs Wafer Manufacturing

KAP034: Corrective and Preventive Action

KAP045: Package Test

KAP080: Return Material and Disposition

KAP092: Product Recall Procedure

## 8.4 Analysis of Data

WJ Communications collects and analyzes data to demonstrate the effectiveness of the quality management system and to evaluate where continual improvement can be made. Analysis of data includes information relating to customer satisfaction, conformity of product, characteristics of products and processes, and suppliers.

References: Various KAPs

## 8.5 Improvement

#### 8.5.1 Continual Improvement

WJ continually improves the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

References: Various KAPs

## 8.5.2 Corrective Action

Documented procedures for implementing a corrective action system are established and maintained. Any corrective action taken to eliminate the cause of non-conformities is appropriate to the magnitude of the problem. The system can be fed by various sources including customer service, internal audits, inspection, and field returns. Corrective action plans are developed, documented, and tracked until closure. The process owners are responsible for addressing the corrective action requests as assigned.



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References:

KAP034: Corrective and Preventive Action

## **8.5.3** Preventive Action

Documented procedures for implementing a preventive action system are established and maintained. Any preventive action taken to eliminate the cause of potential non-conformities are appropriate to the magnitude of the problem. The system can be fed by various sources including customer service, internal audits, inspection, and field returns. Preventive action plans are developed, documented, and tracked until closure. The process owners are responsible for addressing the preventive action requests as assigned. Internal audits and failure investigations are performed to detect, analyze, and eliminate potential causes of non-conformities.

Reference:

KAP034: Corrective and Preventive Action

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## APPENDIX A

## WJ COMMUNICATIONS KEY ACTIVITY PROCEDURES (KAPs)

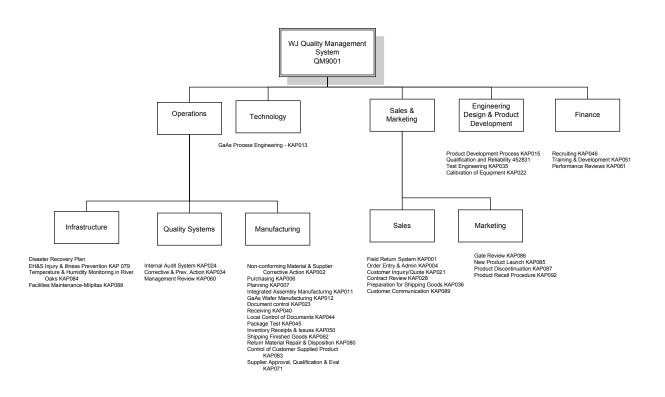
DEPARTMENT	KEY ACTIVITY PROCEDURE	KAP NO.	
Customer Service	Field Return System	001	
Purchasing	Non-Conforming Materials and Supplier Corrective Action	002	
Customer Service	Order Entry and Administration		
Purchasing	Purchasing	006	
Planning	Planning	007	
Integrated Assembly Manufacturing	Integrated Assembly Manufacturing	011	
GaAs Manufacturing	GaAs Wafer Manufacturing	012	
GaAs Engineering	GaAs Process Engineering	013	
Business Development/Design Engineering	Product Development Process (PDP)	015	
Business Development/Customer Service	Customer Inquiry/Quote	021	
Test Engineering	Calibration of Test and Meas. Equip.	022	
Document Control	Document Control Procedure	023	
Quality Systems	Internal Audit System	024	
Business Development	Contract Review	028	
Quality Systems	Corrective and Preventive Action	034	
Test Engineering	Test Engineering	035	
Customer Service	Preparation for Shipping Goods	036	
Receiving	Receiving	040	
Manufacturing	Local and Shared Control of Doc.	044	
GaAs Package Test	Package Test	045	
Human Resources	Recruiting	046	
Planning	Inventory Receipts and Issues	050	
Human Resources	Training and Development	051	
QMT	Management Review	060	
Human Resources	Performance Reviews	061	
Shipping	Shipping/Finished Goods	062	
Purchasing	Supplier Approval, Qualification and Evaluation	071	
Safety	EH & S – Injury & Illness Prevention Program	079	
Manufacturing	Return Material Repair and Disposition	080	
Business Development	Control of Customer Supplied Product	082	
Manufacturing and Process Engineering	ESD Control	083	
Facilities	Temperature & Humidity Monitoring in River Oaks	084	
MarCom	New Product Launch	085	
Product Line Management	Gate Review for New Products	086	
Product Line Management	Product Discontinuation Procedure	087	
Facilities	Facilities Requirements-Milpitas Facility	088	
Customer Service	Customer Communication	089	
Information System	Computer and Phone System Backups		
Product Line Management	Product Recall Procedure	092	

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## APPENDIX B

## WJ COMMUNICATIONS ORGANIZATION CHART



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DWG. NO.

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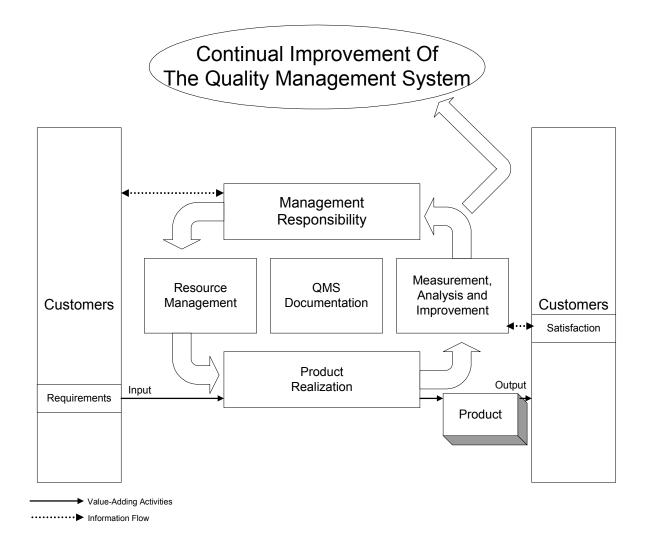
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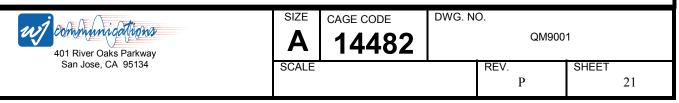
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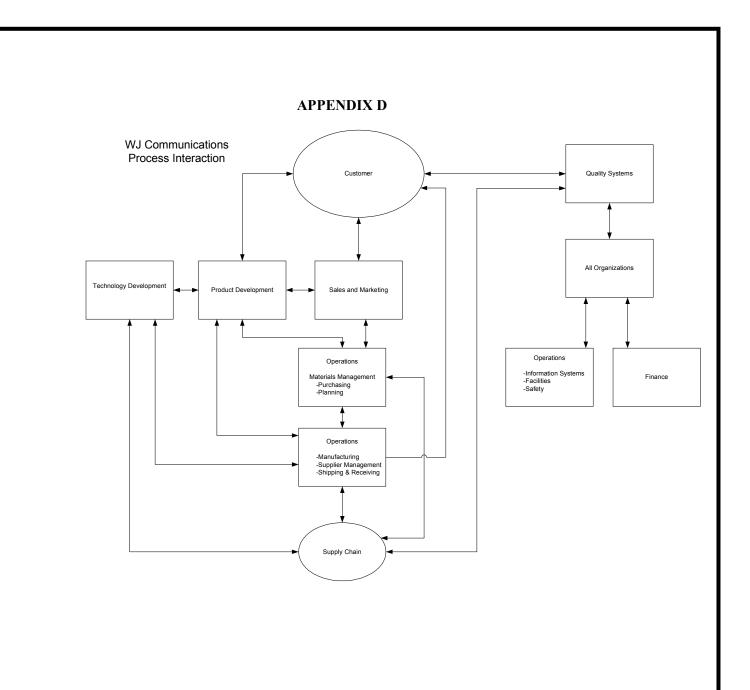
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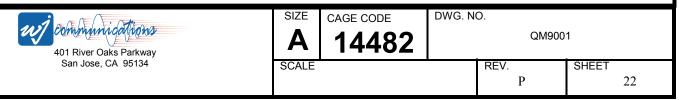
# APPENDIX C Quality Management System Interactions



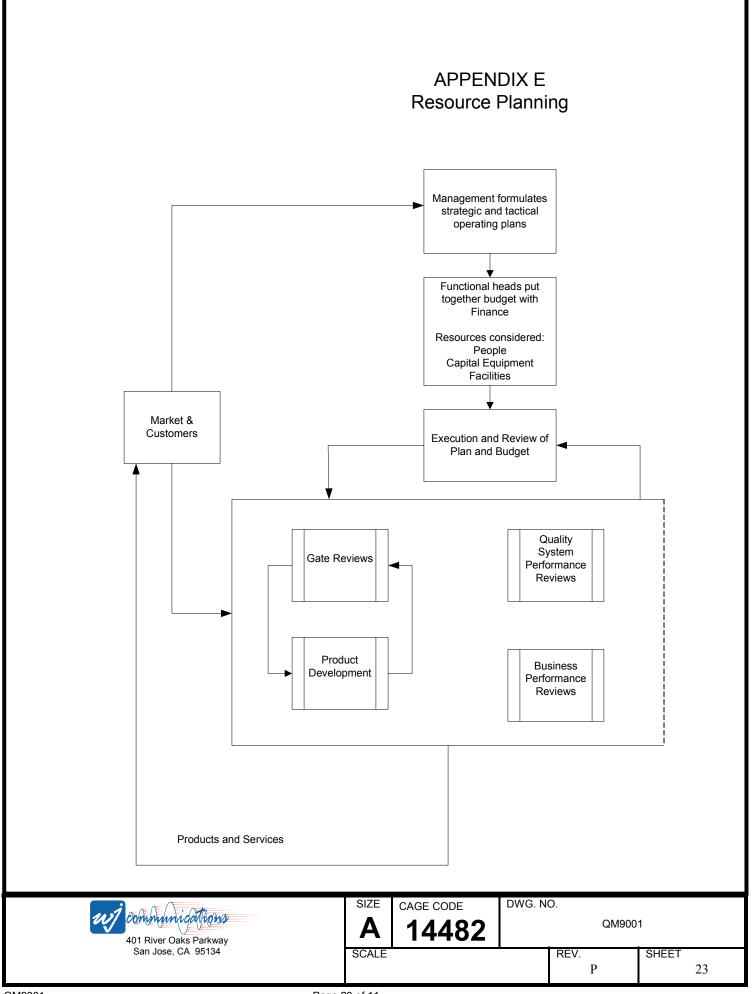


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## **Appendix F Quality Policy Poster**

# WJ COMMUNICATIONS

## **Mission Statement**

WJ Communications' mission is to be the supplier of choice of high-value RF semiconductors and other products for wireless and wire-line networks.

## **Quality Policy**

WJ Communications is committed to satisfying customers by providing quality products, complying with all requirements, and continually improving our quality management system.

## **Quality Objectives**

- Ensure customer satisfaction by delivering quality products and services when and how customers want them
- Comply with internal, external and ISO9001 requirements
- Continually improve processes to enhance product quality and lower business costs

Quality Policy 8/30/03

