QUALITY MANUAL

Circuit Connect, Inc.

QMS

Document No: QP-QM Revision: N

(X) Attached is an uncontrolled copy of our Quality Manual.

No updates shall be provided upon revision change.

QUALITY MANUAL

Revision Status and Approval Log

Revision	Date	Sections Changed
A	11/11/03	Original 2000
B	03/15/05	Changes per Audit
C	03/13/06	Changes per Audit
D	08/31/06	Revise Quality Policy
E	09/19/06	Revised 5.5.1 and 5.5.2, Corrected typing errors
F	01/02/07	Revised 7.5.1 and 7.5.2, Corrected typing errors
G	11/6/09	Revise references to ISO 9001:2000 to 2008
H	12/02/09	Revise to new standard 9001:2008
I	10/20/10	Add Counterfeit Prevention
J	10/03/11	Add ITAR Requirements
K	03/22/12	Revised statement at 1.1(C) to include Rigid Flex Add capability to 1.2.1
L	9/22/16	Revised to integrate the requirements of MIL-PRF-31032B as applicable
M	5/1/18	Update to ISO 9001-2015 and remove requirements to MIL-31032B. Added applicable requirements to Quality Policy statement
N	10/30/20	Remove references to Preventative Actions

Quality Policy

Circuit Connect, Inc.

Is committed to satisfying its customers and applicable industry / regulatory requirements for all interested parties through the manufacturing of high quality printed circuit boards with on time delivery. At ***CCI*** we strive to continually improve through process control, employee involvement, and management commitment.

CCI Strives Consistently to Meet its GOALS through…

- *Customer Satisfaction*
- *On Time Delivery*
- *Building High Quality PCB's*
- *Continuous Improvement*

INTRODUCTION

0.1 General

This Quality Manual specifies requirements for Circuit Connect Inc. which are used to address customer satisfaction, to meet customer and applicable industry/regulatory requirements, and to meet the requirements of ISO9000, and is supported by additional procedures.

0.2 Process Approach

This Manual has adopted the process approach to quality management. Figure 1, is a conceptual illustration of the process approach at Circuit Connect, Inc.

THE PROCESS APPROACH

For Continuous Improvement of the Quality Management System

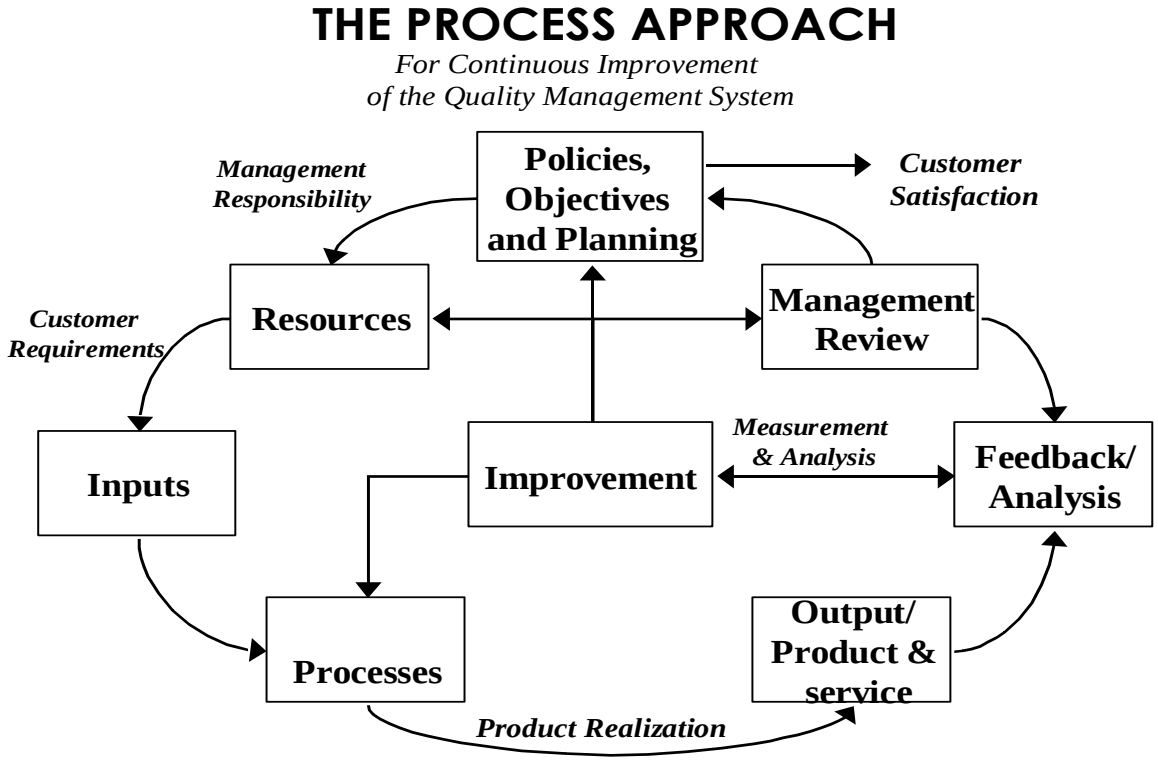

Figure 1

(1) SCOPE

1.1 General

This document specifies requirements for a quality management system where Circuit Connect, Inc.:

a) Demonstrates its ability to provide consistent product that meets customer and applicable regulatory requirements, and;

b) Addresses customer satisfaction through the effective application of the system, including processes for continual improvement.

c) Circuit Connect was founded in 1990 as a manufacturing facility specializing in high end technology, state of the art single/double sided, multi-layer and rigid flex printed circuit boards. Currently approved by Underwriters Laboratories (File # E115009) our products are used in the military, computer peripheral, telecommunications, networking, and automotive, cabling and audio-video industries. We perform "Quality on Time" product delivery and service; utilizing standard lead times and quick turn prototype capabilities.

Circuit Connect's headquarters is located at 4 State Street in Nashua, New Hampshire. The manufacturing facility features climate controlled clean room and leading edge waste treatment capabilities.

1.1.1 Authorization and Purpose

This manual was developed to provide an overview of Circuit Connect's policy, philosophy and programs for managing quality; and to show compliance with ISO 9001: This manual is aimed towards answering questions our customers most frequently ask in regard to our quality program.

Our Quality Policy instills the responsibility for product quality, process control and reporting across the organizational structure. Circuit Connect's employees are empowered to act upon issues that impact product quality and take the necessary actions.

Controlled copies are distributed as needed and obsolete copies are removed from access points and destroyed. The quality system described herein is reviewed annually by the Management Review Team.

The Management Review Team is responsible for the review and approval of the documented system. The Team is comprised of the following:

CEO and /or President
Manufacturing Manager
ISO Mgt. Representative
Finance
Quality Assurance

1.2 Permissible Exclusions

1.2.1 Circuit Connect, Inc. has exclusions on Design capability

(2) REFERENCE DOCUMENTS

Standards

ISO9000 current rev, ISO9001 current rev, ISO9004 current rev, and associated QP's (level 2 documents).

(3) TERMS AND DEFINITIONS

NOTE: The terms used in this Manual are to describe the supply-chain as follows:

SUPPLIER ORGANIZATION CUSTOMER

(4) QUALITY MANAGEMENT SYSTEM

4.1 General Requirements

Circuit Connect, Inc. establishes, documents, implements, maintains and continually improves a quality management system in accordance with the requirements of ISO9001 current rev.

To implement the quality management system, Circuit Connect, Inc.:

a) Identifies the processes needed for the quality management system;

b) Determines the sequence and interaction of these processes;

c) Determines criteria and methods required to ensure the effective operation and control of these processes;

d) Ensures the availability of information necessary to support the operation and monitoring of these processes;

e) Measures, monitors and analyzes these processes, and implements action and necessary to achieve planned results and continual improvement.

f) Interested parties may include Owners/ Partners, sub contractors and neighbors

g) Risk and Opportunity evaluations.

Circuit Connect, Inc. manages all processes contemplated in this Quality Manual in accordance with the requirements of ISO9001 current rev.

4.2 Documentation Requirements

4.2.1 General

The quality management system documentation includes:

a) Procedures required per ISO9001 current rev (Quality Manual, Policy and Objectives)

b) Documents required by Circuit Connect, Inc. to ensure the effective operation and control of its processes.

c) Records.

4.2.2 Quality Manual

This quality manual has been established and maintained to include:

a) The scope of the quality management system, including details, and justification for, any exclusions (see 7.3);

b) Reference Documents to documented procedures (see appendix A);

c) A description of the sequence and interaction of processes included in the quality management system.

This quality manual is maintained as a controlled document.

4.2.3 Control of Documents

Documents required for the quality management system are controlled. This Documented procedure has been established:

a) To approve documents for adequacy prior to issue;

b) To review, update as necessary and re-approve documents;

c) To identify the current revision status of documents;

d) To ensure relevant versions of applicable documents are available at points of use;

e) To ensure documents remain legible, readily identifiable and retrievable;

f) To ensure documents of external origin determined by the organization to be necessary for the planning and operation of QMS are identified and their distribution controlled;

g) To prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

4.2.4 Control of Quality Records

All records are kept per procedure. Such records are maintained to provide evidence of conformance to the requirements and of the effective operation of the quality management system.

(5) MANAGEMENT RESPONSIBILITY

5.1 Management Commitment

Executive Management Personnel provides evidence of commitment to the development and improvement of the quality management system by:

a) Communicating to the employees of Circuit Connect, Inc. the importance of meeting customer as well as regulatory and legal requirements;

b) Establishing the quality policy and quality objectives;

c) Conducting Management Reviews;

d) Assuring the availability of necessary resources.

5.2 Customer Focus

Management ensures that customer needs and expectations are determined per procedure. Product realization and contract review are converted into requirements and fulfilled with the aim of achieving customer satisfaction.

5.3 Quality Policy

Executive Management has defined the Company's quality policy. This policy:

a) Is appropriate to the purpose of Circuit Connect, Inc.;

b) Includes a commitment to meet requirements and to continual improvement;

c) Provides a framework for defining, establishing, documenting and reviewing quality objectives;

d) Is communicated and understood at appropriate levels within the company;

e) Is reviewed for continuing suitability.

5.4 Planning

5.4.1 Quality Objectives

Executive Management ensures that all department managers within Circuit Connect, Inc. establish quality objectives annually. These quality objectives are measurable and consistent with the quality policy and include the commitment to continual improvement as well as those needed to meet requirements for product.

5.4.2 Quality Planning

Managers ensure that the resources needed to achieve the quality objectives are identified and planned. The quality plan is documented and kept according to procedure. The Management Representative ensures that change is conducted in a controlled manner and that the integrity of the quality management system is maintained during this change.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

Circuit Connect, Inc. shall identify functions and their interrelations. The organization chart is available within the company to communicate and facilitate effective quality management. The Quality Manager and/or the Assist Quality Manager are the Management Representative. Circuit Connect, Inc. has defined and communicated these responsibilities in the form of SOP's

Executive Management
Approve the quality policy
Define the organizational structure
Assign authority and responsibility
Appoint a management representative
Periodically review the quality system
Ensure adequate resources necessary for maintaining the system are available
Evaluate escalated customer concerns
Define and monitor company goals

Manufacturing
Determines production equipment and production personnel requirements.
Maintains production equipment
Maintains applicable quality records
Conducts training needs assessment
Production Control

Process Engineer
Controls and monitors processes
Maintains applicable quality records
Prepares quality/production plans

Purchasing
Approves purchasing documents
Selects qualified suppliers and subcontractors
Determines vendor criteria
Monitors and documents vendor performance
Administers raw material storage/inventory areas
Maintains applicable quality records
Monitors vendor performance

Quality Assurance
Defines workmanship standards
Implement, maintain and monitor the quality system
Implements the internal audit program
Initiates requests for and tracks corrective actions
Maintains the calibration system
Determines the criteria for the purchase and selection of inspection, measuring and test equipment.
Conducts supplier audits and surveys
Handles nonconforming product issues
Quality Control performs inspection and testing in accordance with quality plans
Maintains applicable quality records

Training Coordinator
Implements the company training program
Maintains training records

Management Representative
Coordinates document control activities
Maintains applicable quality records
ISO Management Representative

Customer Service/ Sales
Insures service requirements are implemented according to the contract.
Maintains applicable quality records
Reviews customer requirements
Contract /Order Review
Documents and monitors customer concerns

Administration
Defines personnel qualifications
Monitors company safety program

Environmental / Health and Safety
Compliance for all environmental mediums
Insures compliance for the overall EHS system
Health and Safety loss prevention programs
Local, state and federal programs
Internal issues reporting
Compliance of WWT systems
Compliance of HazMat
Hazardous waste coordination

5.5.2 Management Representative

Executive management has appointed the Quality Manager and /or Quality Assurance, as the management representative who, irrespective of other responsibilities, has the responsibility and authority for:

a) Ensuring that processes of the quality management system are established and maintained;

b) Reporting to top management on the performance of the quality management system, including needs for improvement;

c) Promoting awareness of customer requirements throughout CCI. Acting as liaison with external parties on matters relating to the quality management system.

5.5.3 Internal Communication

Circuit Connect, Inc. has created appropriate processes to ensure communication among its various levels and functions regarding the processes of the quality management system and their effectiveness

5.5.4 ITAR Compliance

Circuit Connect, Inc's compliance program assures all personnel employed are either a citizen of the USA or are a permanent resident. Any visitor must show proof of citizenship or residency by producing a Birth certificate, a valid passport or a Green card. Visitors to Circuit Connect must provide the same documentation to enter the factory. .

5.6 Management Review

5.6.1 General

Circuit Connect, Inc. management team reviews the quality management system at least once per year to ensure its continuing suitability, adequacy and effectiveness. This review evaluates opportunities for changes to Circuit Connect, Inc.' Quality Management System, including its quality policy and quality objectives.

5.6.2 Review Input

Input to management review includes current performance and improvement opportunities related to the following:

a) Audit results;

b) Feedback from internal and external customers and other interested parties;

c) Process performance and product conformance;

d) Status of corrective actions;

e) Follow-up actions from earlier management reviews;

f) Changes that could affect the quality management system;

g) Recommendations for improvement from internal and external sources.

5.6.3 Review Objectives (output)

The Management Review will include actions related to:

a) Improvement of the quality management system and its processes;

b) Improvement of product related to customer requirements;

c) Resource needs.

Results of management reviews are recorded and maintained.

(6) RESOURCE MANAGEMENT

6.1 Provision of Resources

Circuit Connect provides the resources necessary to implement and maintain an effective quality system and continually improve the system and its effectiveness.

6.2 Human Resources

6.2.1 Assignment of Personnel

Personnel, who are assigned responsibilities defined in the quality management system and work affecting product, are deemed competent on the basis of applicable education, training, skills and experience.

6.2.2 Training, Awareness, and Competency

Circuit Connect, Inc. Management:

a) Identifies competency requirements for personnel performing activities effecting conformity to product requirements;

b) Provides training to satisfy these needs;

c) Evaluates the effectiveness of the training provided;

d) Ensures that its employees are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives;

e) Maintains appropriate records of education, experience, training and qualification.

6.3 Facilities

Circuit Connect, Inc. provides and maintains its facilities to achieve the conformity of product, including:

a) Workspace and associated facilities;

b) Equipment, hardware and software;

c) Supporting services. (Such as transport, communications or information systems)

6.4 Work Environment

Circuit Connect, Inc. maintains its facilities and manages the needs of the work environment needed to achieve product conformity, as appropriate.

(7) PRODUCT REALIZATION

7.1 Planning of Realization Processes

The sequence of processes and sub-processes required to achieve the product defines product realization. Planning of these realization processes is consistent with the other requirements of Circuit Connect, Inc. quality management system and is documented in forms suitable for Circuit Connect, Inc. method and areas of operation. In planning the processes for realization f product Circuit Connect, Inc. has determined the following, as appropriate:

a) Quality objectives for the product;

b) The need to establish processes and documentation, and provide resources and facilities specific to the product;

c) Verification and validation activities, and the criteria for acceptability;

d) Records are necessary to provide confidence of conformity of the processes and resulting product.

Documentation that describes how the processes flow of the product is applied in manufacturing can be referred to as a quality plan.

7.2 Customer-Related Processes

7.2.1 Identification of Customer Requirements

Circuit Connect, Inc. determines customer requirements including:

a) Product requirements specified by the customer, including the requirements for availability, delivery and support;

b) Product requirements not specified by the customer but necessary for intended or specified use;

c) Obligations related to product, including regulatory and legal requirements.

7.2.2 Review of Product Requirements

Circuit Connect, Inc. reviews the identified customer requirements together with any additional requirements determined. Contract review is conducted prior to the commitment to supply a product the customer (e.g. submission of a tender, acceptance of a contract or order) and ensures that:

a) Product requirements are defined;

b) Where the customer provides no documented statement of requirement, the Customer requirements are confirmed before acceptance;

c) Contract or order requirements differing from those previously expressed (e.g. in a tender or quotation) are resolved;

d) Circuit Connect, Inc. has the ability to meet defined requirements.

The results of the review and subsequent follow-up actions are recorded. Where product requirements are changed, Circuit Connect, Inc. ensures that relevant documentation is amended. Circuit Connect, Inc. communicates any changes to relevant personnel to ensure they are made aware of the changed requirements.

7.2.3 Customer Communication

Circuit Connect, Inc. arranges Communication, Measurement, Analysis and Improvement with customers relating to:

a) Product information;

b) Inquiries, contracts or order handling, including amendments;

c) Customer feedback, including customer concerns.

7.3 Design and/or Development

This element is not applicable, Circuit Connect, Inc. does not design or develop product.

7.4 Purchasing

7.4.1 Purchasing Control

Circuit Connect, Inc. has established purchasing processes to ensure purchased product conforms to requirements. Circuit Connect, Inc.:

a) Evaluates and selects its suppliers based on their ability to supply product in accordance with its requirements;

b) Defines the type and extent of control to be exercised depending upon the type of product, the impact of purchased product on the quality of final product, and previously demonstrated capability and performance of Suppliers;

c) Establishes and maintains a database of acceptable Suppliers.

The results of evaluations and follow-up actions are recorded.

7.4.2 Purchasing Information

Purchasing documents contain information describing the product to be purchased, including where appropriate:

a) Requirements for approval or qualification of;

- Product
- Procedures
- Processes
- Equipment
- Personnel

b) Quality management system requirements.

Persons authorized to purchase materials are trained to ensure the adequacy of specified requirements contained in the purchasing documents prior to their release.

7.4.3 Verification of Purchased Products

Circuit Connect, Inc. identifies and implements the activities necessary for verification of purchased product. Where Circuit Connect, Inc. or its customer proposes to perform verification activities at the supplier's premises, Circuit Connect, Inc. will specify the intended verification arrangements and method of product release in the purchasing information.

7.4.4 Counterfeit Prevention

Circuit Connect shall ensure that only new materials are used in products purchased. This will alleviate the possibility of the inadvertent use of counterfeit parts. Circuit Connect will only purchase parts procured directly from the Original equipment Manufacturers (OEMS), through the OEM's authorized distribution chain, or if through an independent distributor, OEM documentation that authenticates traceability must be available upon request.

7.5 Production

7.5.1 Control of Production

Circuit Connect, Inc. controls production through:

a) The availability of information that specifies the characteristics of the product;

b) Where necessary, the availability of work instructions;

c) The use and maintenance of suitable equipment for production and service operations;

d) The availability and use of measuring and monitoring devices;

e) The implementation of monitoring and measuring activities;

f) The implementation of defined processes for release, delivery and applicable post delivery activities.

7.5.2 Validation of Processes

Validation demonstrates the ability of the processes to achieve planned results. Circuit Connect, Inc. validates any production and service processes where the resulting output cannot be verified by subsequent measurement or monitoring. This includes any processes where deficiencies may become apparent only after the product is in use or has been delivered.

Circuit Connect, Inc. has defined arrangements for validation that include the following, as applicable:

a) Qualification of processes;

b) Qualification of equipment and personnel;

c) Use of defined methodologies and procedures;

d) Requirements for records;

e) Revalidation.

7.5.3 Identification & Traceability

Circuit Connect, Inc. identifies, where appropriate, the product by suitable means throughout production and service operations. Status is identified with respect to measurement and monitoring requirements. Circuit Connect, Inc. controls and records the unique identification of the product, where traceability is a requirement.

7.5.4 Customer Property

Care will be exercised while customer property is under control or being used by Circuit Connect, Inc. Management will identify, verify, protect and maintain customer property (including intellectual property given in confidence) provided for use or incorporation into the product. Occurrence of any customer property that is lost, damaged or otherwise found to be unsuitable for use is recorded and reported to the customer immediately.

7.5.5 Preservation of Product

Circuit Connect, Inc. preserves product conformity to customer requirements during internal processing and delivery to the intended destination. This includes identification, handling, packaging, storage and protection.

7.5.6 Control of Measuring and Monitoring Equipment

Circuit Connect, Inc. identifies the measurements to be made as well as the measuring and monitoring devices required to assure product conformity to specified requirements. Measuring and monitoring devices used are controlled to ensure that measurement capability is consistent with the measurement requirements.

Where applicable, measuring and monitoring devices are:

a) Calibrated and adjusted periodically or prior to use, against devices traceable to international or national standards; where no such standards exist, the basis used for calibration is recorded;

b) Safeguarded from adjustments that would invalidate the calibration;

c) Protected from damage and deterioration during handling, maintenance and Storage;

d) To have the results of their calibration Documented;

e) To have the validity of previous results reassessed if they are subsequently found to be out of calibration, and corrective action taken.

Noncommercial or customized software used for measuring and monitoring of specified requirement is validated prior to use.

(8) MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 Planning

Circuit Connect, Inc. defines, plans, and implements the measurement and monitoring activities needed to assure conformity of the product and QMS and achieve continuous improvement. This includes the determination of the need for, and use of, applicable methodologies including statistical techniques.

8.2 Measurement and Monitoring

8.2.1 Customer Satisfaction

Circuit Connect, Inc. monitors information on customer satisfaction and/or dissatisfaction as one of the measurements of performance of the quality management system. The methodologies for obtaining and using this information are described in procedure.

8.2.2 Internal Audit

Circuit Connect, Inc. conducts internal audits to determine whether the quality management system conforms to the requirements of ISO9001 current rev and has been effectively implemented and maintained.

Circuit Connect, Inc. plans the audit program annually, taking into consideration the status and importance of the activities and areas to be audited as well as the results of previous audits. The audit scope, frequency and methodologies are to be defined at that time. Audits are conducted by personnel other than those who perform the activity being audited.

Management responsible for the area being audited takes timely corrective action on deficiencies found during the audit. Follow-up actions include the verification of the implementation of corrective action, and the reporting of verification results.

8.2.3 Measurement and Monitoring of Processes

Circuit Connect, Inc. applies suitable methods for measurement and monitoring of those realization processes necessary to meet customer requirements. These methods confirm the continuing ability of each process to ensure planned results. When these results are not achieved, actions and corrections will be taken.

8.2.4 Measurement and Monitoring of Product

Circuit Connect, Inc. measures and monitors the characteristics of the product to verify that requirements for the product are met. This is carried out at appropriate stages of the product realization process. Evidence of conformity with the acceptance criteria is documented. Records will indicate the authority responsible for delivery to customer.

Product release and delivery will not proceed until all the specified activities have been satisfactorily completed, unless otherwise approved by the customer.

8.3 Control of Nonconforming Product

Circuit Connect, Inc. ensures that product which does not conform to requirements is identified and controlled to prevent unintended use or delivery. These procedures are defined and documented.

Nonconforming product is corrected and subject to re-verification after correction to demonstrate conformity. When nonconforming product is detected after delivery or use has started, Circuit Connect, Inc. takes appropriate action regarding the consequences of the nonconformity.

Product which cannot be repaired or reworked is scrapped. Scrap product is identified and the disposition documented.

8.4 Analysis of Data

Circuit Connect, Inc. collects and analyzes appropriate data to determine the suitability and effectiveness of the quality management system and to identify improvements that can be made. This includes data generated by measuring and monitoring activities and other relevant sources.

Circuit Connect, Inc. analyzes this data to provide information on:

a) Customer satisfaction and/or dissatisfaction;

b) Conformance to customer requirements;

c) Characteristics of processes, product and their trends;

d) Suppliers.

8.5 Improvement

8.5.1 Planning for Continual Improvement

Circuit Connect, Inc. plans and manages the processes necessary for the continual improvement of the quality management system. Circuit Connect, Inc. facilitates the continual improvement of the quality management system through the use of the quality policy, objectives, audit results, analysis of data, corrective action and management review.

8.5.2 Corrective Action

Circuit Connect, Inc. takes corrective action to eliminate the cause of nonconformity's in order to prevent recurrence. Corrective action is to be appropriate to the impact of the problems encountered. The documented procedure for corrective action is Circuit Connect, Inc. QP-14, and defines requirements for:

a) Identifying nonconformity's (including customer complaints);

b) Determining the causes of nonconformity;

c) Evaluating the need for actions to ensure that nonconformity's do not recur;

d) Determining and implementing the corrective action needed;

e) Recording results of action taken;

f) Reviewing the effectiveness of corrective action taken.

CIRCUIT CONNECT: REFERENCE OF CLAUSES TO ELEMENTS

CLAUSE	CONTENT DESCRIPTION	ELEMENT	CCI DESIGNATION
1	SCOPE	1	1.1
2	NORMATIVE REERENCES	2	2

3	TERMS/DEFINITIONS/CONDITIONS	3	3
4	CONTEXT OF THE ORGANIZATION		4.1
	UNDERSTANDING THE CONTEXT OF THE ORG		
	REQUIREMENTS / EXPECTIONS OF INTERESTED PARTIES		
	DETERMINING THE SCOPE OF THE QMS		4.1
	QUALITY MANAGEMENT SYSTEMS AND PROCESS		
	REQUIREMENTS		4.1.a
5	LEADERSHIP	5	5.1
	CUSTOMER FOCUS		5.2
	COMMUNICATING THE QUALITY POLICY		5.1.a
	QUALITY POLICY		5.3
	INTERNAL COMMUNICATIONS		5.5.3
	ORG ROLES, RESPONSIBILITIES,AUTHORITY		5.5.1
	ORG CHART		
6	PLANNING	6	5.4
	ACTIONS TO ADDRESS RISK AND OPPORTUNITIES		
	QUALITY OPBJECTIVES AND PLANNING TO ACHIEVE THEM		5.4.1
	QUALITY OBJECTIVES		5.4.1
	QUALITY PERFROMANCE OBJECTIVES		5.4.2
	PLANNING CHANGES		5.4.2
7	SUPPORT (RESOURCE MGT)		6.1
	PEOPLE		6.2
	INFRASCRUCTURE		6.3
	ENVIRONMENT (OPERATIONS)		6.4
	MONITORING AND MEASUREMENTOF RESOURCES	7	7.5.6
	MEASUREMENT TRACIBILITY		7.5.6
	ORGANIZATIONAL IKNOWLEDGE	6	6.1, 6.2.1
	COMPETENCE		6.2.2
	AWARENESS		6.2.2
	COMMUNICATION		5.5.3
	DOCUMENTED INFORMATION	4	4.2
	CREATING AND UPDATING		4.2.3
	CONTROL OF DOCUMENTED INFORMATION		4.2.3
8	OPERATION	7	
	OPERATIONAL PLANNING AND CONTROL		7.1
	CUSTOMER COMMUNICATION		7.2.3
	DETERMINATION OF REQUIREMETNS (PRODUCT/SERVICE)		7.2.1
	REVIEW OF REQUIREMENTS RELATED TO PRODUCTS		7.2.2
	CHANGES TO REQUIREMENTS FOR PRODUCTS		7.2.2
	CONTROL OF EXTERNAL PRODUCT/PRODUCTS		7.5.4
	TYPE/EXTENT OF CONTROL OF EXTERNAL PROVISIONS		7.4.4,7.4.3
	INFORMATION FOR EXTERNAL PROVIDERS		7.4
	IDENTIFICATION AND TRACIBILITY		7.5.3
	CUSTOMER SUPPLIED/EXTERNAL PARTNER PROVISION		7.5.4
	PRESERVATION		7.5.5
	POST DELIVERY ACTIVITIES		7.5.1
	CONTROL OF CHANGES	8	8.3

	RELEASE OF PRODUCT		8.2
	CONTROL NONCONFORM. PROCESS/PRODUCT OUTPUT		8.3
9	PERFORMANCE EVALUATION		8
	MONITORING,MEASUREMENT,ANALYSIS,EVALUATION		8.2.3, 4
	CUSTOMER SATISFACTION		8.2.1
	ANALYSIS AND EVALUATION		8.4
	INTERNAL AUDIT		8.2.2
	MANAGEMENT REVIEW	5	5.6
	MANAGEMENT REVIEW INPUT		5.6.2
	MANAGEMENT REVIEW OUTPUT		5.6.3
	IMPROVEMENT	8	8.5
	NONCONFORMITY/ C.A.R.		8.5.2
	CONTINUAL IMPROVEMENT		8.5.1, 2

QMS Manual Addendum

QUALITY MANUAL AND RELATIONSHIP TO ISO 9001-2015

Circuit Connect recognizes the importance of its QMS and the following document references how CCI has incorporated the 2015 changes into its philosophy, systems and corporate direction.

The QMS has incorporated the use of a defined Process Approach utilizing several methods. Included are Risk Based Management and the Plan-Do-Check-Act cycle for improving the QMS.

Enhancement of Customer Satisfaction and the ability to consistently provide the same will be facilitated by the above methods.

This QMS manual addendum shall be used as the normative reference to the International Standard, and how they both apply to CCI, and how the current system conforms to the 9001-2015 standard.

QUALITY MANAGEMENT PRINCIPALS

There are several Quality Management Principals which CCI has adopted and realizes. They are the basic foundation to the QMS and improvement. They are

- Customer Focus
- Leadership
- Communication and engagement of employees
- Process Approach
- Risk and opportunity
- These are not new to CCI, but are better reflected in the QMS 2015.

PROCESS APPROACH

The Process Approach utilized by CCI has long been defined and used by CCI, as it is incorporated into the Quality Manual. It is enhanced by the overview of the process simplified into PLAN-DO-CHECK-ACT and is outlined below. NOTE: Numeric references are aligned with the CCI Quality Manual QP-QM

PLAN: Scope (5.1), Policy (5.3), Leadership (5.1), Customer Focus (5.1.5.2), Organizational Functions (5.5.1), Planning (4.1), [w/ Risk and Opportunity as well as Processes (5.4), Acceptance Criteria (5.4), and Resources], Roles and Responsibilities (5.5), Authorative references (4.1) [statutory and regulatory] , Resources (5.1)(personnel (6.3) and infrastructure (6.4), environmental (6.4)), Monitoring and Measurement (4.1.e), Knowledge (6.2.1), Training (6.2), Competence (6.2.2), Communication (6.2.2),(both Customer (7.2.2) and Internal (7.2.2), Documentation and Doc Control (4.2.3), Customer Revision Control (7.2.1), Purchasing (7.4)

DO

Review of requirements and Quality plan (7.1), Awareness (6.2.1), Quality Plan (7.1), Operational Planning (7.1) and Control (7.5),[including requirements, SOPs, resources, process control (8.1)], Identification and Traceability (7.5.3), Preservation (7.5.5), External Property (7.5.4), Post Delivery, Internal Revisions

CHECK

Acceptance Criteria (8.2.4), Release of Product, Control of Non Conforming Product (8.3), Performance, Monitoring Measurement Analysis and Evaluation (7.5.6), Internal Audits (8.2.2), Management Review w/ Input (8.5.1), Process Validation (7.5.2) Measurement (8.2.4)

ACT

Management Review Outputs (8.5.1), Improvement Opportunities (8.5.1), Improvement (8.5), Non-conformities (8.3), Corrective Actions (8.5), Continuous Improvement Opportunities (8.5)

Risk Based Thinking (RBT) and Management

Risk Based Thinking, although never formally documented, has been and is practiced by CCI. The management practice was considered many years ago while contemplating our first QMS. It was quickly realized that to address all the risks individually was not possible but a broad approach would work.

When considering risk, we found out that the implementation of QMS and ISO 9001 addresses many of the risks associated with the manufacture of printed circuits. Thus came the elements of the QMS implemented prior to and during the ISO 9000 certification process.

Risk had to be defined and considered before RBT could become a function. We defined it informally as *"what would you consider up front to be the best PCB manufacturer possible*". As such, RBT is a Quality Tool, not a solution.

Risk Consideration of PLANNING included how to procure best material possible, employees and training, leadership, infrastructure, equipment, measurement processes, documentation, purchasing, environment and customer focus and conformity. These are addressed by the implementation of ISO and QMS standards which are designed to mitigate the possible risks in planning and beginnings of the operations.

Risk considerations in DO (Manufacturing) include proper process data, training, controls, shipping, and identification and SOPs. As above, these were addressed by RBT and implementation of QMS.

CHECK: Acceptance considerations were implemented. Performance, Analysis, Evaluation and all the items considered to be valuable to the customer were addressed.

Lastly ACT: Reviews, including Management Review input and output, actions, and Improvements were implemented.