2301 Universal Street, Oshkosh, WI, 54904

External Provider Quality Manual Revision 14

Table of Contents

Multicircuits, Inc. Contacts:		3
Approvals		3
1.	Purpose	4
2.	Scope	4
3.	Expectations	4
4.	Quality System Requirements	4
5.	ITAR Requirements	4
6.	Risk Assessment and Mitigation	5
7.	External Provider Assessment	5
8.	Advanced Product Quality Planning	5
9.	Process Changes	5
10.	Engineering Change Request	6
11.	Problem Resolution	6
12.	Rejection Policy	6
13.	Corrective Action Process	6
14.	Problem Solving Expectations	6
15.	Record Retention	6
16.	Delivery Requirements	6
17.	Packaging Requirements	7
18.	Flow down to sub-tier External Providers	7
19.	Rating Metrics	7
20.	Confidentiality Agreement	7
21.	Human slavery and trafficking	7
22.	Conflict Minerals	7
23.	Counterfeit Parts	7
24.	Terms and Conditions	8
25.	Procurement- Certified Domestic External Providers	8
26.	Procurement- Offshore PCB External Providers ONLY	9
Appendix A - Supplier Survey		10
Change History		20

Multicircuits, Inc. Contacts:

Mark Lynaugh: Purchasing Manager
Phone: (920)385-7528
Email: mlynaugh@multicircuits.com

Tricia Walker: Quality Manager
Phone: (920)385-7563
Email: twalker@multicircuits.com

Michael Thiel: Director of Operations
Phone: (920)385-7523
Email: mthiel@multicircuits.com

Approvals

Date of the approval will be documented electronically within the uniPoint software record of this manual.

Mike Thiel, Director of Operations

Mark Lynaugh, Purchasing Manager

Tricia Walker, Quality Manager

1. Purpose

The purpose of this manual is to communicate Multicircuits' quality requirements and expectations to our External Providers (Suppliers).

2. Scope

The contents of this manual apply to Multicircuits, Inc. External Providers of materials and services.

3. Expectations

It is the External Providers' **responsibility** to review this manual to ensure the requirements can be fulfilled.

If requirements cannot be fulfilled, it is the External Provider's **responsibility** to communicate any exclusions to Multicircuits Purchasing or Quality Manager, in writing within 10 days of review.

Each PO contains a link to the EPQM (most current revision) which can be found on our website: www.multicircuits.com/ **downloads/External Provider Documents/Quality Manual download**. External Providers are expected to periodically review as necessary to ensure you are in compliance with the requirements.

Confirmation of order is the External Provider's agreement to comply with the requirements of this manual (current revision at time of order acceptance).

Multicircuits will at times flow down to our sub-tier External Providers the contractual terms, conditions, and quality requirements specified by our customers. All External Providers are expected to review and apply these flow downs as necessary.

Multicircuits encourages its External Providers to share our commitment to ethics, product or service conformity, environmental and social responsibility, and product safety. External Providers should comply with social, environmental, and ethical industry standards as outlined in the RBA Code of Conduct or have processes in place that to reflect these initiatives.

4. Quality System Requirements

Multicircuits, Inc. encourages External Providers to implement fundamental quality management systems that include configuration management, risk-based thinking, are process based, and continuously improve their processes and systems.

Multicircuits, Inc. does not require certification, however a quality management system is required. It is recommended and preferred that our External Providers implement and maintain a QMS that reflects requirements of ISO 9001, AS9100, MIL-PRF-31032 or equivalent.

It is the External Providers **responsibility** to provide updated QMS certification to Multicircuits.

External Providers must have a process in place to ensure that all employees are aware of:

- their contribution to product quality;
- their contribution to product safety;
- the importance of ethical behavior.

Right to source Inspection:
Multicircuits, and their interested parties must have the right of access to all applicable areas within the External Providers facility and documented information at any level of the Supply chain.

5. ITAR Requirements

ITAR requirements will be communicated on the RFQ, PO, or Subcontracted Service Report. The External Provider must be ITAR registered to perform the service requested for ITAR controlled product. If they are not ITAR registered, they must notify Multicircuits of their ITAR status and intent to register. If they are ITAR registered, they must provide their Registrant code # letter to be retained by Multicircuits. All ITAR regulations must be followed while product is in the External Providers' possession.

All ITAR controlled product shipped to an External Provider will be secured by placing a label under the taped seams on the top and bottom of each box. The package will contain additional labels to be used by the External Provider in

the same fashion on all packages that are returned to Multicircuits after service work is completed. If the package label/seal is broken upon arrival at the External Provider, Multicircuits must be contacted immediately.

It is the External Providers responsibility to forward a current copy of ITAR registration to Multicircuits each year prior to registration expiration.

6. Risk Assessment and Mitigation

Multicircuits is dependent on our External Providers to provide products and services without disruption. Our External Providers are expected to have a Risk Assessment process in place to evaluate all risks associated with all externally provided processes, products, and services, and mitigate or prevent their ability to supply products/ or services to Multicircuits without causing late delivery to our customer.

7. External Provider Assessment

New External Providers are required to meet all documentation requirements as called out in the requirement letter provided. The External Provider Quality Manual (EPQM) is available for download at www.multicircuits.com/dowloads. Exclusions must be submitted in writing to Multicircuits within 10 days of review. Exclusions will be reviewed by Multicircuits Purchasing and Quality Manager.
Multicircuits may schedule on-site audits for the following:

- new external provider;
- change in QMS status;
- external provider rating;
- quality issue trends;
- change in process at external provider facility;
- change in management;
- material changes;
- material shortages;
- location change;
- supplied product is deemed certified and/or complex.

8. Advanced Product Quality Planning

APQP is designed to communicate product quality expectations and verify that External Providers have adequate processes in place to provide Multicircuits quality product on time.

If necessary, Multicircuits will communicate/review the requirements in advance of receiving production lots.

Multicircuits may conduct a project launch review with the External Provider at their facility. The review may include inspection of documentation and processes associated with production of material/service prior to production.

First Articles may be requested if the requirement is "flowed down" by Multicircuits' customer. In some cases, special forms such as AS9102, AIAG PPAP Forms current revision may be required and will be noted on the Purchase Order. This form must be returned with product unless a waiver is received by the External Provider prior to shipping product back to Multicircuits, along with expected date of completion.

9. Process Changes

Process changes must be communicated, and approved (prior to change) if any of the following occur:

- QMS status change (e.g., certification change or withdrawal);
- change in processes;
- change in materials;
- change in management;
- contact change;
- location change;
- equipment changes;
- use of sub-tier external provider.

Note: All changes must be submitted in writing to quality@multicircuits.com.

10. Engineering Change Request

If the External Provider cannot meet product requirements and wishes to request a change, an ECN must be submitted to Multicircuits for review. The information will be communicated to our customer for final approval. The change may require a revision to the print or applicable documentation prior to making the change. Approval from Multicircuits must be obtained prior to any changes being finalized. The change request must be communicated to Multicircuits' Quality Manager.

11. Problem Resolution

When non-conforming product is identified, the External Provider will take swift action to bring resolution to the problem.

If the requirements cannot be met, written approval or deviation must be obtained from the Purchasing Manager and/or Quality Manager at Multicircuits, prior to shipping non-conforming product. Multicircuits reserves the right to reject non-conforming material/services provided at the External Providers expense without this documentation.

12. Rejection Policy

Products that fail to meet Multicircuits stated requirements will be rejected. Multicircuits will make the decision whether stock is to be sorted internally to maintain production needs in which case the External Provider will be charged back for costs related to the sort or will be responsible for the sort. The External Provider may be asked to sort the product at Multicircuits facility depending on severity.

When a rejection occurs, the Purchasing Manager will request an RMA (Return Material Authorization). The product will be returned at the External Providers' expense. Inventory will be contained until it is deemed acceptable.

The non-conformance will be noted on the External Provider Quality Rating for the PO it was shipped against.

13. Corrective Action Process

Upon receipt of non-conforming product, a corrective action may be issued depending on the occurrence severity. The containment response must be communicated to Multicircuits' Purchasing Manager within 24 hours, and the completed corrective action submitted within 10 business days of the date issued unless otherwise specified. If the due date cannot be met, it is the External Providers' **responsibility** to communicate this to Multicircuits' Quality Manager and a new due date will be agreed upon.

Corrective Action may also be initiated if the External Providers rating is not maintained at the required levels as noted in this manual. Upon review of the quarterly scorecards, the Purchasing and/or Quality Manager may initiate a "Declining Score Notification". This form will communicate the reason for the notification and whether corrective action will be required. The External Provider can use their own format to complete the corrective action. The form must be submitted to Multicircuits Quality Manager for review/ rejection/ approval.

Reference Document: Declining Score Notification Form # 100266

14. Problem Solving Expectations

The External Provider may choose the problem-solving method to determine root cause and corrective action that will prevent reoccurrence. Accepted formats include: 5 whys and 8D formats. Method of root cause analysis must be noted on the corrective action.

15. Record Retention

The External Provider shall retain documented information that provides evidence the process has been completed as planned for a minimum of 10 years (unless specified) and shall be available to Multicircuits upon request. The only exception to this will be when the External Provider provides a copy of records and CoC with each shipment for Multicircuits to retain, but this must be communicated to Multicircuits if the requirement cannot be met.

16. Delivery Requirements

External Providers are required to maintain on-time delivery per rating criteria. If an External Provider will not be able to deliver product by the required due date, it is their **responsibility** to notify Multicircuits' Purchasing Manager as soon as possible to schedule an acceptable delivery due date. The scorecard will be adjusted to reflect this change as applicable.

17. Packaging Requirements

Packaging requirements will be determined and agreed upon with the respective purchasing manager prior to shipment being sent to Multicircuits.

18. Flow down to sub-tier External Providers

External Providers must not flow down work to sub-tier External Providers unless written approval has been received from Multicircuits, Inc. Once approval has been received, all applicable requirements must be noted in the purchasing documents, including key characteristics when required.

19. Rating Metrics

Delivery:
Domestic: Late delivery- 0 days: Late Pass or Fail (P/F)
Offshore: Late delivery +/- 5 days: Pass or Fail (P/F)
Early delivery- 5 days: Early Pass or Fail (P/F)
Quality:
Defective/Non-conforming product: Pass or Fail (P/F)
Quantity:
Missing parts/ samples: Pass or Fail (P/F)
Documentation:
Missing documentation: Pass or Fail (P/F)
Packaging:
Damaged packaging: Pass or Fail (P/F)

Continual Performance:
Performance will be monitored on a 3-month rolling average and scorecards will be assessed quarterly.
Domestic External Providers must maintain an average in all 5 categories- ≥ 90%
Offshore External Providers must maintain an average in all 5 categories- ≥ 80%
Failure to meet the requirement may result in the issuance of a corrective action.
Note: an unsatisfactory rating for 2 consecutive quarters may result in disqualification of “Certified” status.
*See Offshore Delivery Schedule Exception for details

20. Confidentiality Agreement

External Providers shall not disclose to others or use for their own purposes any trade secrets, confidential information, or confidential documents (e.g., prints, customer specifications, etc.) obtained from Multicircuits. All supplied documentation and/or data shall be considered confidential.

If supplied documentation needs to be shared for any reason, prior written approval must be obtained from Multicircuits.

21. Human slavery and trafficking

It is Multicircuits expectation that our External Providers conduct their business in a responsible and ethical manner and that they comply with all applicable laws, including employment and human rights laws. Specifically, we forbid External Providers from employing or benefiting from child or compulsory labor as defined in the California Transparency in Supply Chain Act.

22. Conflict Minerals

To comply with legislative requirements, External Providers will not ship product to Multicircuits, Inc that contain metals derived from Conflict Minerals as defined in the Dodd Frank financial reform law.

23. Counterfeit Parts

Multicircuits, Inc. does not purchase EEE (Electrical, Electronic and Electromechanical) parts/components. Raw materials are purchased from authorized sources. (Ref. Purchasing Procedure 100241). External Providers must agree they **will not** ship any counterfeit product to Multicircuits and must have controls in place to prevent use of any such products.

24. Terms and Conditions

All Multicircuits, Inc. purchase orders contain a link to the EPQM. It is the responsibility of the Supplier to periodically review for compliance and ensure they have the most current revision at the time of order acceptance.
External Providers will be paid within discount terms if available or within negotiated terms.

25. Procurement- Certified Domestic External Providers

Cost Recovery

External Providers will be responsible for all associated recovery costs for defective materials or insufficient documentation supplied to Multicircuits. Costs may include but are not limited:

- Administrative
- Rework charges incurred
- Freight charges
- Production downtime

Procurement Quality Requirements

- Every shipment must contain a packing slip with Multicircuits purchase order number
- Certificate of compliance or Certificate of Analysis- (Raw materials/ chemicals)
- All products must have manufactured date and expiration date on the label
- All first-time shipments must contain an MSDS (material safety data sheet)
- Prepreg must have a minimum of 3 months' shelf life remaining when received
- Chemistry must have a minimum of 3 months' shelf life remaining when received
- Inks must have a minimum of 3 months' shelf life remaining when received
- All orders must be confirmed to Multicircuits by email to the purchaser as shown on the PO.
- Confirm ship date, method of shipping, quantity, and price
- Receiving hours are Monday through Friday 7am to 5pm
- Must follow ITAR requirements when noted.
- 30-day advance notification of any pricing increase is required.

Delegation of Product Verification

Multicircuits, Inc. delegates product verification to our External Providers to provide product ready to use, and that all testing shall be completed as planned prior to shipment to Multicircuits.

Multicircuits requires that the External Provider have a calibration process in place that is compliant to ISO/ IEC 17025 or ANSI/ NCSL Z540 for gaging that are used to record verification readings.

A Certificate of Conformance or Analysis must accompany each shipment certifying the product is acceptable and meets all specified requirements.

Defense Priorities & Allocations System (DPAS)

For information on DPAS visit https://www.dcma.mil/DPAS/
Orders rated DO or DX will be communicated on the Purchase Order.

Subcontracted Service Report

A subcontracted service report will be provided to the External Provider with each shipment along with all required documentation (e.g., prints). The report specifies the service to be completed as well as requirements needed to perform the service.

The Subcontracted Service Report must be signed and dated after the required service has been completed and MUST be included with the return shipment. All in-process inspection documentation will be retained by the External Provider and available upon request from Multicircuits. This form certifies that all work has met the requirements noted on the form.

Subcontractors must utilize all industry and customer specifications noted on the form. If the External Provider does not have a copy of the most current revision of a stated customer specification, Multicircuits must be contacted to provide a copy. All industry specifications (e.g., IPC 6012 current revision) will need to be purchased by the External Provider and controlled and retained for future reference.

26. Procurement- Offshore PCB External Providers ONLY

General Expectations

If Multicircuits is charged for components due to a failure of purchased product, the Offshore External Providers will be expected to reimburse Multicircuits' full cost of the return including component cost. Multicircuits will provide a breakdown of the recovery cost along with details of the return to the Offshore External Provider.

Delivery Schedule Exception:

Offshore External Providers will be required to maintain a delivery score of 80% or higher. A 5-day late window will be allowed and scored as a pass only with preapproval from the Purchasing or Quality Manager.

Subcontracted PCB Surface Finish Shelf-Life Requirements

ENIG- 2 years
Immersion Silver- 1 year
HASL- 1 year
OSP- 3 months
Nickel- 2 years
Electroless Nickel- 2 years
Immersion Tin- 3 months
Lead free HAL- 1 year

Procurement Quality Requirements

- Order requirements will be provided with each PO and may be communicated in the PO copy, email, or other documentation provided with the order.
- Every shipment must contain a packing slip.
- Absolutely no Styrofoam packaging allowed.
- Humidity indicator card required for each package.
- Shipment should be limited to 40lbs per box.
- X-outs must be marked from corner to corner in black permanent ink on both sides of the PCB. If PCB material is black, then contrasting color such as silver or white must be used. X-outs must be packaged separately. When no specific x-out requirement exists, follow equal to or less than 15% of the array.
- 100% electrical test required. All individual boards must be ET stamped. If there is insufficient room to stamp the board, a waiver must be requested.

Delegation of Product Verification

Multicircuits delegates product verification to our External Providers to provide product ready to use, and that all testing shall be completed prior to shipments to Multicircuits.

Multicircuits requires that the External Provider have a calibration process in place that is compliant to ISO/ IEC 17025 or ANSI/ NCSL Z540 or offshore equivalent, for gaging that are used to record verification readings.

A Certificate of Conformance or Analysis must accompany each shipment certifying the product is acceptable.

Special Requirements

The general expectations and special requirements listed above will be conveyed to Offshore External Provider prior to shipments being received by Multicircuits.

All documentation and sample requirements will be noted on the purchase order or accompanying Offshore Order Checklist.

The Offshore External Provider may be required to complete corrective action for failure to comply with quality requirements.

Reference Documents:	Offshore Nonconforming /Rework Report	Form 100181
	Offshore Order Checklist	Form 100123

Appendix A - Supplier Survey

Supplier Information

Company Name: Business Classification: General products produced:

Address: City: State/Zip:

Website address: Ph: Fax:

Key Contacts

	Name:	Phone Number:	Email Address:
President/ Owner			
Quality Manager			
Purchasing Manager			
Sales Manager			
Accounting Manager			
Manufacturing Manager			

Number of years in business: Facility Total Sq feet:

Total employees:

Manufacturing: Quality: Engineering: Customer Service:

Quality Management System (QMS) Certification

		Certificate #	Expiration Date
ISO9001	☐ Yes ☐ No		
AS9100	☐ Yes ☐ No		
TS16949	☐ Yes ☐ No		
ISO13485	☐ Yes ☐ No		
ISO18001	☐ Yes ☐ No		
ISO14000	☐ Yes ☐ No		
Other			
ITAR Registration	☐ Yes ☐ No	Registrant Code #:	

Please submit a copy of applicable QMS certs for our records.

Do you have a Quality Manual? ☐ Yes ☐ No

Can a copy be obtained? ☐ Yes ☐ No

If your company is currently certified to one of the above QMS standards **STOP HERE**. Pease return this page along with a copy of your certificate.

If you are not able to provide a QMS certificate, please complete the balance of this self-survey.

Self-survey **Note: Items in plain text are ISO 9001:2015 Requirements, and *ITALICS AS9100 2016*

Context of the Organization				
1	Does management currently have a process in place for determining internal and external risks (both positive and negative)?	☐ Yes	☐ No	☐ N/A
2	Has Management identified interested parties that are relevant to the QMS?	☐ Yes	☐ No	☐ N/A
3	Has Management determined the scope of the organization?	☐ Yes	☐ No	☐ N/A
4	Has management determined and implemented the processes needed to ensure effective operations of the QMS?	☐ Yes	☐ No	☐ N/A
5	Does your company have a process sequence and interaction chart?	☐ Yes	☐ No	☐ N/A
6	Does your company have an organizational chart that identifies assigned process responsibilities?	☐ Yes	☐ No	☐ N/A
Leadership				
7	Does top management demonstrate leadership and commitment regarding the QMS? Including but not limited to the following: • accountability for the effectiveness of the QMS; • quality policy and objectives are established; • QMS requirements integrated into the organization business processes; • risk-based thinking and process approach promoted throughout the organization; • determine adequate resources are in place to support the QMS; • communicate the importance of conforming to QMS requirements and the effectiveness of the QMS; • ensure that the QMS is achieving intended results; • engage with, direct and support employees to contribute to the success of the QMS; • promote continuous improvement; • support managers to demonstrate their leadership regarding their areas of responsibility.	☐ Yes	☐ No	☐ N/A
8	*Has a management representative been appointed by top management, who as organization freedom and unrestricted access to top management to resolve quality management issues?*	☐ Yes	☐ No	☐ N/A
Planning				
9	Do you have a process in place that evaluates risks and opportunities?	☐ Yes	☐ No	☐ N/A
10	Do you have a quality policy implemented and reviewed for suitability?	☐ Yes	☐ No	☐ N/A
11	Are quality objectives determined, and monitored to ensure that planned results are met?	☐ Yes	☐ No	☐ N/A
12	Are the quality objectives in line with the quality policy?	☐ Yes	☐ No	☐ N/A
13	How is it communicated throughout your organization?	☐ Yes	☐ No	☐ N/A

14	When planning how to achieve quality objectives, the planning includes: • who will be responsible; • what will be done; • what resources are needed; • when it will be completed by; • how the results will be evaluated.	☐ Yes	☐ No	☐ N/A
15	When changes are required to you QMS, is it done in a planned manner and the following taken into consideration: • reason for the change, and potential consequences; • integrity of the QMS; • resources available; • changes in responsibility.	☐ Yes	☐ No	☐ N/A
Support				
16	Has top management defined and communicated the responsibilities and authority within the organization?	☐ Yes	☐ No	☐ N/A
17	Do you have jobs descriptions developed and evaluated for all positions that can affect the performance and effectiveness of the QMS?	☐ Yes	☐ No	☐ N/A
18	Does your organization have a process in place to ensure that the following are communicated to employees and understood: • the quality policy; • the quality objectives; • their contribution to the effectiveness of the QMS, and benefits of improved performance; • implications of not conforming to the QMS requirements; • *contribution to product conformity;* • *QMS documentation and relevant changes;* • *contribution to product safety;* • *importance of ethical behavior?*	☐ Yes	☐ No	☐ N/A
19	Do you have a process in place for determining communications regarding internal and external requirements that are relevant to the QMS?	☐ Yes	☐ No	☐ N/A
20	Is there a process in place for creating and updating documented information?	☐ Yes	☐ No	☐ N/A
21	If yes, confirm the process includes the following: • documented information is identified; • format and media are identified; • documents reviewed and approved for adequacy.	☐ Yes	☐ No	☐ N/A
22	Is there a process in place for determining control of documentation information that ensures documentation is available and protected against loss?	☐ Yes	☐ No	☐ N/A

23	Does your organization have a process in place that addresses the following activities: • distribution, access, use, and how to retrieve documented information; • how to maintain legibility and preservation, and storage of retained documented information; • revision control; • retention and disposition determined; • *prevention of untended use of obsolete documented information, and controls in place for identifying documented information, if it is being used for any reason?*	☐ Yes	☐ No	☐ N/A
24	Is external documented information that is relevant to the QMS controlled?	☐ Yes	☐ No	☐ N/A
25	Is your system electronic or hard copy?	☐ Yes	☐ No	☐ N/A
	If electronic, do you have a process defined to protect against loss, unauthorized or unintended changes, corruption, and physical damage?	☐ Yes	☐ No	☐ N/A
Operations				
26	Does your organization have a process in place for planning, implementing, and controlling the processes needed to meet all interested party requirements? The following being taken into consideration: • personal/ product safety; • producibility/ Inspectability; • suitability of materials used to construct product; • product obsolescence; • FOD- prevention and detection; • preservation of product; • final disposal and recycling at product life end.	☐ Yes	☐ No	☐ N/A
27	Are needed resources determined to ensure that products conform to interested party requirements, and *meet on time delivery*?	☐ Yes	☐ No	☐ N/A
28	Is there a process implemented that includes what retained documented information shows evidence that planned results are being carried out and verify conformity of products?	☐ Yes	☐ No	☐ N/A
29	*Are critical items being determined and controlled when Key Characteristics have been identified?*	☐ Yes	☐ No	☐ N/A
30	*Are planning activities performed for product and service provision in a controlled and structured manner including scheduled events and sequence to meet requirements at acceptable risk, within resource and capacity?* *e.g., Project Planning, Program Management*	☐ Yes	☐ No	☐ N/A
31	*Is there a process in place to control transfer of work?*	☐ Yes	☐ No	☐ N/A

32	*Does your organization have a process in place to plan, implement and control of operational risk which includes:* • *assignment of responsibility;* • *definition of risk criteria;* • *identification, assessing and communication of identified risks;* • *identification, implementation, and control of actions to mitigate risk;* • *acceptance of risk after mitigating actions have been implemented?* *e.g., FMEA, PMFEA, Control Plans*	☐ Yes	☐ No	☐ N/A
33	*Do you have a process in place to control the configuration of product to ensure identification and control of physical and functional attributes are maintained throughout the product life cycle?*	☐ Yes	☐ No	☐ N/A
34	*Does your organization have a process in place to plan, implement, and control the needed processes to assure product safety that includes:* • *assessment of hazards and manage associated risks;* • *manages safety critical items;* • *manages analysis and reports in of events affecting safety;* • *communication and training of personnel?*	☐ Yes	☐ No	☐ N/A
35	*Does your organization a have a process in place to plan, implement and control any processes to prevent the use of counterfeit parts in product delivered to the customer?*	☐ Yes	☐ No	☐ N/A
36	Does your organization have a customer communication process in place that includes the following: • provide information relating to product; • handles customer enquiries, contract review, order including any changes; • customer feedback (including complaints); • control of customer property; • contingency actions when relevant?	☐ Yes	☐ No	☐ N/A
37	Does your organization have a process in place that: • defines any statutory or regulatory requirements and those considered necessary by the organization; • can meet claims for the product supplied; • *determines special requirements for products;* • *identifies operational risks?*	☐ Yes	☐ No	☐ N/A
38	Do you have a process in place that reviews customer requirements prior to committing to supply product?	☐ Yes	☐ No	☐ N/A
39	*Do you have a process in place that determines if some of the requirements cannot be met, or partially met, that you will negotiate mutually acceptable requirements with Multicircuits?*	☐ Yes	☐ No	☐ N/A
40	Do you have a process in place to amend relevant documented information and make relevant persons aware when requirements for products and service are changed?	☐ Yes	☐ No	☐ N/A

41	Do you have a purchasing process in place that ensures all externally provided processes, products, and services conform to requirements? This includes customer designated sources.	☐ Yes	☐ No	☐ N/A
42	Do you have a process in place that identifies what documented information is to be used, and what results will be achieved? The process should include: • acceptance/ Rejection criteria; • where verification is performed; • results to be retained as documented information; • the use of an acceptable (recognized statistical principle) Sampling plan to determine sample size; • use of competent personnel; • validation and periodic revalidation of the ability to achieve planned results; • actions to prevent human error; • *implementation of workmanship criteria;* • *implementation of release, delivery, and post-delivery activities;* • *accountability of product during production;* • *prevention, detection, and removal of FOD (Foreign Object Debris);* • *control of utilities and supplies can affect product conformity;* • *identification and records of products released to allow for recall.*	☐ Yes	☐ No	☐ N/A
43	*Is there a process in place to validate equipment, tools and software used to automate, control, monitor, and measure prior to being used in production?*	☐ Yes	☐ No	☐ N/A
44	*Is there a process in place for periodic checks on stored production equipment or tooling?*	☐ Yes	☐ No	☐ N/A
45	*Is there a process in place for validation and control of special processes?*	☐ Yes	☐ No	☐ N/A
46	*Is there a process in place for verification and control of production processes?* *Do you have the capability to perform and document and FAI?*	☐ Yes	☐ No	☐ N/A
47	*Do you have a process in place to control acceptance authority media? (E.g., stamps, electronic signature, passwords, etc.)*	☐ Yes	☐ No	☐ N/A
48	*Do you have a process in place to preserve the integrity of product that includes:* • *cleaning;* • *prevention, detection, and removal of FOD;* • *handling and storage of sensitive products;* • *marking and labeling of products and materials including safety warnings;* • *shelf life and stock rotation (FIFO);* • *handling and storage of hazardous materials?*	☐ Yes	☐ No	☐ N/A

49	Do you have a process in place for post-delivery activities (when applicable)?	☐ Yes	☐ No	☐ N/A
50	Do you have a process in place to review and control process changes?	☐ Yes	☐ No	☐ N/A
51	*If yes, does the process Identify who has the authority to make process changes?*	☐ Yes	☐ No	☐ N/A
52	Is documented information retained from changes made to validate that the change has not affected product conformity?	☐ Yes	☐ No	☐ N/A
53	*Do you have a process in place at appropriate process steps that verifies requirements have been met including:* This should include retention of records that show evidence of conformity and traceable to the person/s who authorized release of product.	☐ Yes	☐ No	☐ N/A
54	Do you have a process in place that identifies and controls nonconforming product to prevent unintended use or delivery? This should include: • appropriate actions taken based on the nature of the nonconformance, even if detection is after delivery; • *definition of authority and responsibility for review/ disposition of nonconforming product, and the process for how approving person/s make decisions;* • *actions taken to contain nonconformance that could affect other processes;* • *timely reporting to customers and interested parties when nonconforming products have been delivered;* • *Completion of corrective actions detected after delivery of product.*	☐ Yes	☐ No	☐ N/A
55	Does your nonconforming process correct, segregate, contain, return, suspend, inform the customer, and obtain *an authorization of acceptance from a relevant authority, when applicable by the customer?*	☐ Yes	☐ No	☐ N/A
56	*Does your nonconforming process have a process in place for disposition of "USE AS IS" for acceptance?*	☐ Yes	☐ No	☐ N/A
57	*Do you have a nonconforming process in place for marking scrap permanently, and controlling them until they are rendered unusable?*	☐ Yes	☐ No	☐ N/A
58	*Do you have a process in place that controls counterfeit, suspect counterfeit parts to prevent reentry into the supply chain?*	☐ Yes	☐ No	☐ N/A
59	*Do you have a process in place to verify nonconformity outputs?*	☐ Yes	☐ No	☐ N/A
60	Does your nonconforming process retain documented information that: • Describes the nonconformance; • Describe actions take; • Concessions obtained; • Identifies the person who has the authority to determine action taken?	☐ Yes	☐ No	☐ N/A
Performance Evaluation				

61	Are management review meetings held at planned intervals?	☐ Yes	☐ No	☐ N/A
62	Are the following inputs considered during management reviews: • status of action items from previous reviews; • changes in external/internal issues relevant to the QMS; • information on the performance and effectiveness of the QMS including trends?	☐ Yes	☐ No	☐ N/A
63	Are the following outputs considered and acted upon during management reviews: • opportunities for improvement; • need for changes to the QMS; • resource needs; • identified risks?	☐ Yes	☐ No	☐ N/A
64	Are records retained from the meeting?	☐ Yes	☐ No	☐ N/A
Improvement				
65	Do you have an improvement process in place that includes: • improvement of products/services to meet requirements and address future need or expectations of your customers; • correction, prevention, or reduction of undesired effects; • improvement of performance and effectiveness of the QMS?	☐ Yes	☐ No	☐ N/A
66	Do you have a nonconforming and corrective action process that reacts appropriately to the nonconforming by: • taking action to control and correct it; • dealing with the consequences?	☐ Yes	☐ No	☐ N/A
67	Do you evaluate causes of nonconformities, so they do not recur or occur elsewhere by: • reviewing and analyzing the NC; • determining the causes including those related to human factors when applicable; • evaluating the need for action to eliminate the NC so that it does not recur or occur elsewhere; • determining if similar nonconformities exist or could potentially occur?	☐ Yes	☐ No	☐ N/A
68	Does your correction action process include: • implementation of any actions needed; • reviewing the effectiveness of corrective actions taken; • updating risks and opportunities determined during planning when necessary; • making changes to the QMS when necessary; • flowing down corrective actions to supplier when it is determined they are responsible for the nonconformity; • taking specific action when timely and effective corrective actions are not achieved?	☐ Yes	☐ No	☐ N/A
69	Do you maintain documented information (records) of the nonconformity and corrective action process?	☐ Yes	☐ No	☐ N/A

70	Do you have a process in place for continual improvement of the QMS?	☐ Yes	☐ No	☐ N/A
71	*Does your organization monitor implementation of continuous improvement activities and evaluate for effectiveness?*	☐ Yes	☐ No	☐ N/A

Survey Completed by: **Title:** **Date:**

Comments or Questions:

Thank you for completing the Quality Management System Self Survey.
Please forward the completed copy to quality@multicircuits.com

Change History

Sections	Revision	Change Description	Date	Completed By
Entire Document	1	New manual/ Final Revision	07/07/09	Chris Gauthier, Tricia Walker, Mark Lynaugh, Mike Thiel
	2	Minor grammatical changes, added procurement requirements	01/21/10	Chris Gauthier
Section 11 revised, Page 10 section 13.0 and deleted appendix C	3	Supplier flow down to sub tier External Providers, removed confidentiality agreement added a statement in Section 13.0 (confidentiality), and form.	04/05/10	Chris Gauthier
Pages 7,10, 14, 18 and 19	4	Section 8.6 added, Section 12.0 Offshore late delivery tolerance, and added reference docs to self survey and removed note on rating of 90% or higher.	02/25/11	Chris Gauthier, Mark Lynaugh and Tricia Walker.
Entire manual	5	Reorganized.	05/11/11	Chris Gauthier
Page 11	6	Revised to include sections 19 and 20, reformatted self survey. Added A9100 to rev C. Added Purchasing Mgr. to self survey. Reworded quality requirements for scoring.	05/18/12	Chris Gauthier, Mike Thiel, Mark Lynaugh and Tricia Walker.
Removed Appendix B	7	Revised to remove old system form numbers and Appendix B Engineering Change Notice.	07/26/13	Chris Gauthier
Pages 4, 5, 6, and 9	8	Changes in record retention, supplier assessment, advanced product quality planning, process changes, engineering change request, corrective action, delivery requirements, flow down, offshore procurement and reference documents added, removed acknowledgement and added Supplier Quality Manual Change Notification form.	11/5/13	Chris Gauthier, Mark Lynaugh and Tricia Walker.
Reviewed entire doc for revisions.	9	3.0 Added 31032, 5.0 added exception about supplier sending CoC when retention period cannot be met, 6.0 added material, 7.0 Added first articles, 8.0 changes must be communicated electronically to QM. Added micro section and ET requirements to offshore procurement.	02/13/15	Chris Gauthier/ Mark Lynaugh and Tricia Walker
Entire Manual	10	Supplier changed to External Provider, entire manual was revised due to ISO 9001: 2015 and AS9100 2016 Rev D changes.	02/28/17	Chris Gauthier

Sections	Revision	Change Description	Date	Completed By
Entire Manual reviewed	11	Added Section 5.0 Risk Assessment and Mitigation, verbage changes within the manual, revised section.	06/01/18	Chris Gauthier
Entire Manual reviewed	12	Updated contact information, removed references to Offshore Purchasing Manager.	05/28/19	Tricia Walker
Revised to add DPAS.	13	Sections 3.0, 24.0 (added DPAS), 25.0. Updated page 11 of self-survey.	04/05/20	Tricia Walker
Entire Manual	14	Purpose reduced to remove redundant statements appearing in other sections, updated formatting, added header including “source” to existing inspection requirement, minor changes to wording where not highlighted where context was unaffected. Added section 3 Expectations and removed 26.0 External Provider Quality Manual Change Notification. RBA code of conduct added to reflect customer flow down I:\DOCUMENT\Quality\Customer Surveys\Plexus\2023\Mammotome-suffix 673). Expanded on sections 7, 23, and 24.	10/18/23	Tricia Walker