



Microwave Solutions Inc.

RELEASED

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## Quality Assurance Clauses

QC-006581-840

Revision D

### 1. Workmanship Standards:

The External Provider shall maintain Quality Workmanship under the guidelines of the following standards where applicable:

IPCA-610, latest Revision- Acceptability of Electronic Assemblies

MIL-STD-883- Test Methods and Procedures for Microelectronics

MIL-HDBK-454- General Guidelines for Electronic Equipment

### 2. Quality Management System:

Microwave Solutions prefers that approved External Providers are certified to standards such as ISO 9001 or AS9100. The External Provider shall implement and maintain a QMS that ensures that all finished goods/services have been inspected and accepted prior to delivery. The inspection should verify that the material being furnished against this P.O. meets the requirements, drawings and specifications referenced. There should also be a record on file at the External Provider's facility. MSI's verifications performed at any level of the supply chain are not used as an evidence of effective control.

### 3. Certificate of Compliance (C of C):

Inspection by Seller: Prior to delivery, Seller shall inspect and/or test goods for compliance with the specifications and purchase order.

All parts supplied to this purchase order will be accompanied by a C of C. The C of C will be dated and signed by the responsible company representative certifying the supplied parts meet all purchase order specification and drawing requirements from the buyer. Certification must include the following:

- A. MSI Purchase Order Number
- B. MSI part number, revision, serial numbers and Lot Clauses.
- C. Lot information for parts manufactured utilizing MSI supplied drawings:

As lots are manufactured, they shall not be combined with other lots. If more than one lot of parts is supplied, they shall be clearly identified and packaged separately. Individual packages may be shipped together in a larger package to minimize shipping costs. Individual Certificate of Compliance for each lot must be contained in shipment.

If the External Provider is supplying PCB and the purchase order requires cross sectioning, each lot will be supplied with plugs, or already be from lots, which have been approved by Microwave Solutions.

- D. Quantity shipped
- E. Name of approved lower-tier External Provider and descriptions of services provided (if applicable)
- F. Country of origin (if applicable)
- G. Test Data, Results, Date and Run Time (if applicable)
- H. Authorized signature and date

#### 4. Competency and Personnel Training

The external providers shall establish a competency and training process for their employees. External providers shall ensure that all personnel whose work has an effect on the quality of the products and services are trained in a safe and competent manner and are aware of their contribution to the product or service conformity; product safety and the importance of ethical behavior. Training shall include pertinent subjects relating to manufacturing, inspection, testing, packaging and handling techniques and shall be documented.

#### 5. Changes to purchase order:

The External Provider shall notify MSI of changes in product and /or process, changes of External Providers, changes of manufacturing facility location that would either change form, fit function or interrupt supply chain and, where required, obtain MSI's approval and flow down to the supply chain the applicable requirements including customer requirements.

Without any prior approval from MSI, the External Provider shall not make any changes to any MSI Purchase Order, including goods and or service covered by Contract and/or Purchase Order, such as, but not limited to:

- A. Any third party External Provider to the External Provider of services, raw materials or goods used by the External Provider
- B. The facility from which the External Provider operates
- C. The price of any of the goods or services

- D. The nature, type or quality of any goods or service, raw material or goods used by the External Provider or its sub-tier External Provider
- E. The fit, form, function, appearance, performance and
- F. The production method or any process in the manufacturing of any goods.

No quantity variances are not permissible between the original order quantity and the actual quantity received without authorization from Buyer. If an over shipment is received, without prior approval, purchaser has the right to reject/accept the quantity in excess of the original ordered quantity.

MSI shall have the right at any time to make changes to the parts, supplies and services stated in the purchase order. If any such changes cause an increase or decrease in the purchase price or the time required for the performance of the purchase order, an equitable adjustment shall be made and the purchase order shall be amended in writing by the parties.

#### **6. Changes in Manufacturing Process Control:**

Our continuous improvement philosophy encourages process improvements both internally and at our External Provider's facilities. However, prior to any such "modification" to a process being implemented, External Provider must complete all required/necessary verifications and tests to ensure that any new process continue to yield product/services that meet MSI specifications.

#### **7. First Article:**

When required by contract, First Articles shall be performed by External Providers. The designated quantity of components, randomly selected from a significant production run, must be produced utilizing production tooling, processing and cycle times. This approval should include dimensional and performance requirements and in some cases may also include specific visual and functional approvals. Where available, first article shall be submitted to MSI and in some instances; functional approval of components will be required. A copy of the first article inspection report, associated drawings and all special process and finish certification of all lower level detail parts must accompany the first shipment of unit/assemblies.

#### **8. Drawing Changes and Control:**

The External Provider's quality system must ensure that the latest engineering drawing and specification are available at the manufacturing, test and or inspection locations. Written procedure should indicate the methods (s) utilized for receipt, review or distribution of all changes and the methods of recalling and disposing of an obsolete item. External Providers

must coordinate document changes with MSI Engineering Department. This may involve customers and/or regulatory authorities in accordance with contract or regulatory requirements.

#### **9. Verification of Purchased Product:**

During the performance of this order, MSI, MIS's customers and/or a regulatory agency including an authorized government representative reserve the right to attend, review, verify and participate in the External Provider's Quality Systems and associated manufacturing process including inspection and testing of any work related to this contract. This activity must be performed in such a manner to not disrupt normal processing and shall be conducted on a non-interference basis. MSI's customer may provide an assessment of requirements and processes related to the performance of this contract.

- A. MSI shall be afforded the right to verify at the MIS's External Providers premises (or External Providers subcontractor's premises) that the External Provider's product (or External Provider's subcontracted product) conform to all specified requirements. Any MSI's customer shall be afforded the same right.
- B. Customer verification activities performed at any level of the supply chain shall not be used by the organization or the External Provider as evidence of effective control of quality and does not absolve the organization of its responsibility to provide acceptable product and comply with all requirements.
- C. Right of Access  
There should be a right of access by MSI our customer and regulatory authorities to the applicable areas of all facilities at any level of the supply chain, involved in the order and to all applicable records.

#### **10. Non-Confirming Parts and Supplies:**

The External Provider shall notify MSI of any non-conforming products, supplies or services and obtain MSI's approval for nonconforming product disposition.

External Provider shall begin containment action immediately upon discovery/notification of a nonconforming parts, supplies and services. If the parts and supplies escaped their facility and has been shipped to MSI, the External Provider will immediately notify the QA Manager of MSI. This notification must include a clear description of the nonconformity, and include as necessary, parts affected, MSI part number, lot code, quantity and date(s) delivered.

For product that has been found or suspected nonconforming prior to shipment to MSI, all requests for approval for “replacement”, “repair” or to be “used as is” must be submitted to MSI for approval and held at the External Provider’s premises pending receipt of documented approval. Failure to respond to the Disposition Notice or CPAR may result in punitive action up to and including removal and or suspension from the MSI Approved External Providers List and may include cancellation of current order.

#### **11. Records Retention Requirements:**

External Provider must retain adequate quality system records, including all production planning documents, process guidelines, laboratory test instructions, and gauge/test equipment verification and calibration and performance test methods. In addition, the External Provider must retain quality performance records for up to 7 years, including the records of the periods indicated and be made available for review as require.

#### **12. Shipment, Packaging and Delivery Schedule:**

Time is of essence and therefore, external provider shall deliver the goods/ or services strictly in accordance with the dates and requirements set forth or referenced on the purchase order and other terms and conditions set forth herein, including but not limited to the shipping, labeling, packaging requirements and statement of work. Delivery of goods must include packing slip, stating the complete information regarding the shipment, invoice (if available at the time of shipment) P.O. and other requested documentation. Products must be properly protected and packaged prior to shipping to prevent damage due to possible rough handling during shipping. Electro-Static Sensitive devices shall be handled, packaged, identified and shipped in accordance with the requirements of ANSI/ESD S20.20. If it becomes necessary, in order to comply with MSI’s required delivery of goods to ship by a more expensive method than specified in the purchase order, any increased transportation costs that result shall be paid for by the External Provider unless the necessity for such rerouting or expedite handling has been caused solely by MSI.

#### **13. Foreign Object Detection (FOD) Control:**

The External Provider shall maintain a process to insure FOD removal prior to shipment. If a substance or object is visible to the unaided eye located on or within a FOD sensitive product whose presence, location, orientation or application is not per drawing specification, then a Foreign Object incident is suspected. All materials, components or assemblies furnished shall be free of foreign objects.