

NOTES	REVISIONS			
(1) Revision of all sheets is same as the cover page.	Rev	Description	Date	Approval
	SEE REVISION L FOR PREVIOUS REVISIONS			
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	N	5661-451 / UPDATE	3/28/18	T.L.

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DRAWING REVIEW & APPROVAL			<b>Q MICROWAVE, INC.</b>	
Resp	Name	Date	Description	
<b>SEE ECO FOR SIGNATURES</b>			PURCHASING, CONDITIONS AND CLAUSES	
			Drawing Number	
			000191	
			CAGE Code	Sheet
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**1.0 PURPOSE**

1.1 The purpose of this procedure is to establish and define the Purchasing and Quality Assurance Clauses that appear on Purchase Orders for material, supplies and services that become a part of shippable product in order to assure that Q Microwave’s suppliers deliver product that will fulfill all contractual and regulatory obligations.

**2.0 APPLICABLE DOCUMENTS**

- 2.1 Internal                      000006, Purchasing
- 2.2 External
  - ASTM B700-08              Specification, Electrodeposited Silver Plating
  - AMS 2404                      Specification, Electro-less Nickel Plating, Rev G
  - AMS-C-26074                Specification, Electro-less Nickel Plating, 2013
  - IPC-4553                      Specification, Immersion Silver Plating, Rev A
  - MIL-C-26074                Specification, Electro-less Nickel Plating, Rev E
  - MIL-DTL-5541              Specification, Chemical Conversion Coatings, Rev F
  - MIL-G-45204                Specification, Electrodeposited Gold Plating, Rev D
  - MIL-PRF-85285            Performance Specification, Coatings, Rev E
  - QQ-N-290                      Specification, Electrodeposited Nickel Plating, Rev C
  - QQ-S-365                      Specification, Electrodeposited Silver Plating, Rev D
  - J-STD-001                    Requirements for Soldered Electronic Assemblies, Rev F

**2.0 PROCEDURE**

- 2.1 The selection of clauses will be based upon the contractual requirements or as deemed necessary by the Quality Manager or responsible management at the time the Purchase Order is reviewed. The flow-down of these requirements will be accomplished by adding the appropriate clauses to the Purchase Order.
- 2.2 It is the responsibility of Purchasing to ensure the appropriate clauses are provided to vendors to ensure meeting all flow-down requirements.
- 2.3 Purchasing or Quality clauses shall not be changed, added or deleted without approval of the Quality Manager.

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**3.0 GENERAL PURCHASING CLAUSES: (See Appendix D for applicability)**

- P-1** Vendor or their sub-tier vendors will allow QMI personnel, QMI customers and regulatory authorities, access to enter and inspect the applicable areas of all facilities, at any level of the supply chain involved in this order and access to records involved with this order upon request.
- P-2** Vendor shall ensure that product is inspected and validated using acceptable monitoring and measuring equipment prior to shipment. When required, QMI will define requirements for approval of product, procedures, processes, and equipment.
- P-3** Vendor shall flow down the applicable information and requirements including customer requirements specified on this purchase order to sub-tier vendors, sub-contractors, etc., paying particular attention to key characteristics or special requirements. This is to include all applicable counterfeit avoidance and detection requirements.
- P-4** All materials supplied to QMI must comply with current part specifications, drawings and drawing notes unless otherwise specified.
- P-5** Vendor shall acknowledge purchase order acceptance by signing and returning or by sending an order acknowledgement.
- P-6** With each shipment of items covered by this Purchase Order, vendor shall submit a certificate of conformance signed by the Manager/Director of Quality or authorized designate, which shall attest that the parts, materials and/or processes used are in compliance with the Purchase Order and applicable Specifications and Drawings. When specified, test or process records are also required.
- P-7** Each part, component or material furnished shall be identified by lot or batch number, traceable to the actual manufacturing process. The lot or batch number may be by date of shop order.
- P-8** Equal Employment Opportunity – Seller hereby agrees to comply with Executive Order 11246, as amended, and its implementing Regulations (including the equal opportunity clause set forth in section 202 of such order) and Section 60-1.4(a) of the Regulations of the Secretary of Labor, Title 41 CFR, Chapter 60, Parts 1-60, which are incorporated into this PO as reference. In addition, this Purchase Order incorporates by reference the Affirmative Action clauses of the Rehabilitation Act of 1973 at 41 CFR Section 60-741.1 and the Vietnam Era Veterans, Readjustment Act of 1974, at 41 CFR Section 60-2050.4 as amended.
- P-9** Supplier certifies compliance with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) if applicable to the manufacturing of their product(s) and certifies they have conducted a reasonable country of origin inquiry for the “conflict minerals utilized in the manufacturing of their products. Conflict minerals include Tantalum, Tin, Gold or Tungsten that originate in the Democratic Republic of the Congo (DCR) or an adjoining country.
- P-10** Vendor shall comply with the exporting conditions defined in Appendix B of this document. Additionally, by accepting an order for any item identified by Q Microwave as containing export controlled information, the vendor certifies it is “ITAR compliant”. This includes vendor registration with the State Department’s DDTC and compliance to DFARS 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting.
- P-11** Vendor shall mark all internal packaging with the appropriate QMI part number. Differing part numbers shall be segregated and packaged separately.
- P-12** Vendor shall notify QMI when end of product life has been established and provide last buy date and potential replacement sources or alternatives.
- P-13** Vendor shall comply and ensure all sub-tier vendors comply with FAR 52.222-50 Combatting, Trafficking in Persons
- P-14** Vendor shall ensure persons involved with products or services provided to the company are aware of their contribution to product or service conformity, product safety, and the importance of ethical behavior in the workplace and in dealings with the company.

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**4.0 QUALITY CLAUSES: (see Appendix D for applicability)**

(QC = control clauses QM = material clauses, QP = process clauses, QT = testing/verification clauses)

**Control Clauses (QC):**

- QC-100** QMS - Vendor shall maintain a Quality Management and Inspection System in compliance with ISO 9001, AS9100, or as approved by QMI.
- QC-101** Records - Vendor shall retain all quality records relating to this order, including material test reports and any processing records, for a minimum of 7 years, unless otherwise specified in the Purchase Order.
- QC-102** Non-Conforming - QMI purchasing must be notified of non-conforming product, for approval of non-conforming product disposition, changes to product and/or processes, changes in manufacturing facility location, changes of suppliers, price, quantity, or delivery, and where required, obtain QMI approval.
- QC-103** Calibration - All calibrations must be traceable to NIST, and conform to ISO 17025 or ANSI-Z-540. Calibration certificates are required for all items.
- QC-104** Counterfeit Prevention - Counterfeit parts prevention and avoidance IAW AS5553 is required. Seller shall ensure only new product is delivered and product shall be supplied only by OEM or authorized distributors. Seller shall flow down these requirements to sub-tier vendors and sub-contractors. QMI is to be notified immediately if these conditions cannot be met. Seller shall immediately notify Q Microwave with the pertinent facts if seller becomes aware or suspects it has delivered counterfeit work. Seller shall also disclose the source of such parts if the parts become the subject of legal or counterfeit issues. When requested by Q Microwave, seller shall provide OCM/OEM documentation that authenticates traceability of the affected items.
- QC-105** DFARS Counterfeit - Vendor shall comply with the Counterfeit Parts requirements of DFARS 252.246-7008 including paragraph (e) for subcontracts including commercial items for electronic parts or assemblies containing electronic parts, unless subcontractor is the OEM.
- QC-106** ESD Packaging - Parts are considered static sensitive and must be packaged in anti-static packaging and marked with an ESD warning.
- QC-107** ESD Handling - Proper ESD handling and processing is required. Vendor shall ensure effective ESD safeguards are implemented, using MIL-STD-1686 as guidelines.
- QC-108** Key Items - Key characteristics or critical items exist and are identified on drawing(s)
- QC-109** Personnel - Requirements for qualification of personnel exists when requirements are defined on Purchase Order.

**Material Clauses (QM):**

- QM-200** Material Certifications - Material certification and analysis sheets for raw material or processed raw material required.
- QM-201** DFARS Specialty Metals - Any Stainless Steel or Kovar type alloys purchased under this order must be certified to DFARS 252.225-7014, Alt 1 or DFARS 252.225-7009. These metals must have been melted in the US or qualified country per DFARS 225.872-1.
- QM-202** ROHS Certification - Materials require ROHS compliance certification.
- QM-203** Shelf Life - Manufacturing date, shelf life and/or expiration date required. Material shall have a minimum of 75% of shelf life remaining unless otherwise noted.
- QM-204** MLC Marking - MLC marking shall meet criteria defined on drawing 400280 unless an exception is stated on this purchase order.

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- QM-205** J-STD Compliance - For solder and flux products, vendor shall provide certificates stating compliance to J-STD-004, J-STD-005 or J-STD-006 as stated on QMI drawings.
- QM-206** Solder Paste Shipment - All solder paste shall be packaged to withstand exposure to temperatures incurred during shipment. Solder paste shall be shipped to ensure delivery on Monday through Thursday only. No shipments are allowed during holiday periods.
- QM-207** Hazardous Shipments - All hazardous materials shall be shipped to ensure delivery on Monday through Thursday only. No shipments are allowed during holiday periods. Current MSDS required. Certificate of analysis required.

**Process Clauses (QP):**

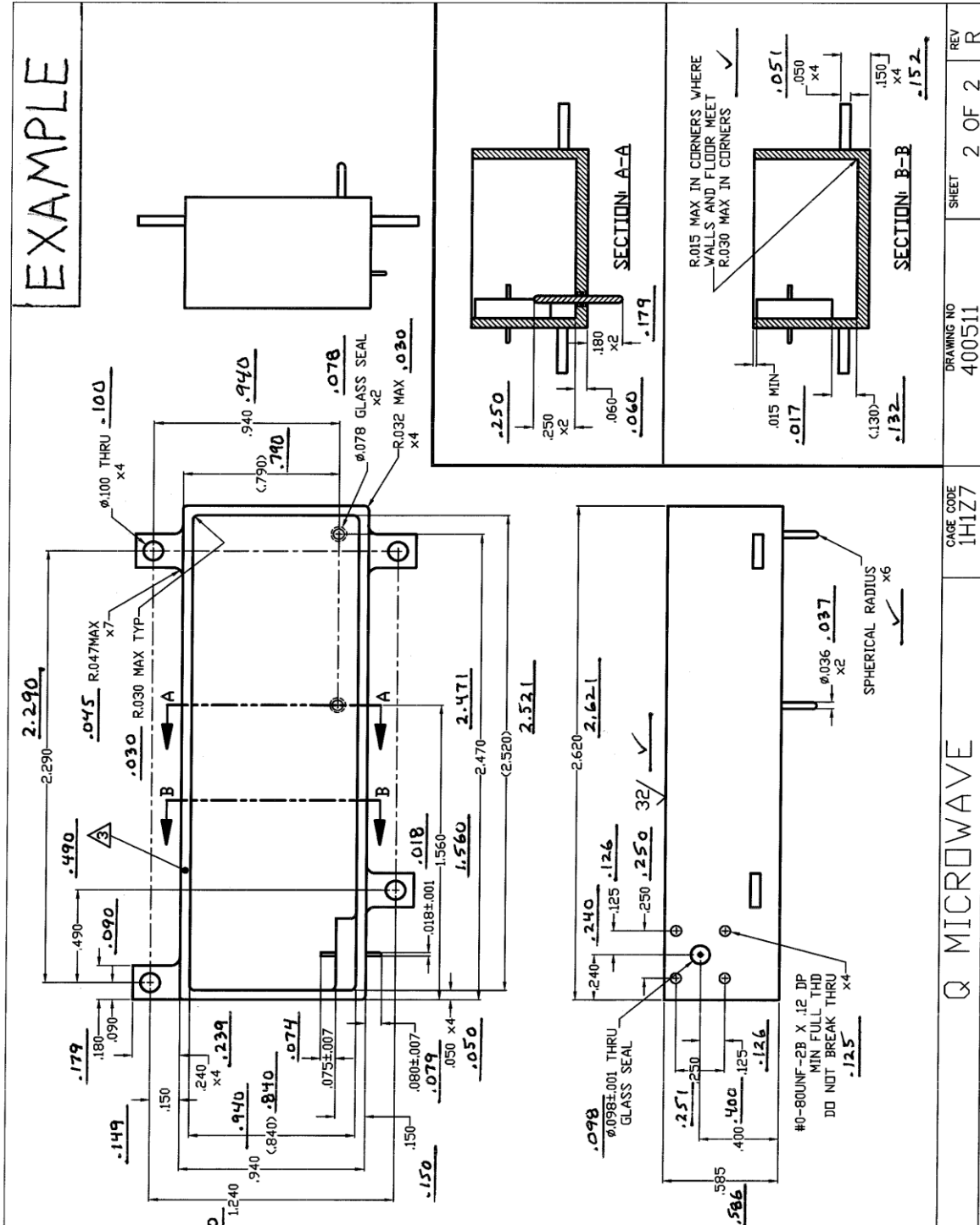
- QP-300** Special Process Vendors - Vendor shall ensure all sub-tier vendors used for special processes are selected from the QMI approved Special Process Vendors List. (See Appendix C) NADCAP certified vendors are preferred.
- QP-301** Pure Tin - No pure tin finishes >97% allowed
- QP-302** Thickness - Thickness report required for all plating layers
- QP-303** Baking - All parts, (100% of order) must be baked for 20 minutes minimum at 250°C +/- 10°
- QP-304** Soldering - Soldering processes, solders, and fluxes shall be in accordance with J-STD-001, Class 3 requirements.

**Testing/Verification Clauses (QT):**

- QT-400** Recorded Dimensions - Vendor is required to provide recorded dimensional measurement verification of all drawing features on a sample basis of (1) piece per lot. (See Appendix A for example).
- QT-401** Lot Data - Sample test data required for each lot produced on this order.
- QT-402** Sample Data - Sample test data for a (25) piece sample is required for each part number produced on this order for each lot shipped.
- QT-403** Verification - Verification (FAI) is delegated to supplier, recorded results and certification is required.
- QT-404** Source Inspection - QMI, our customer, and/or government intend to perform (FAI) verification/inspection at supplier facility. Arrangements and method of product release are stated on this order.
- QT-405** Specimens - Test specimens (e.g. production method, number, storage conditions) for design approval, inspection/verification, investigation or auditing are required.
- QT-406** SPC - This product requires design, testing, inspection, verification (including production process verification), use of statistical techniques for product acceptance, and related instructions for acceptance from QMI. As applicable, critical items including key characteristics, or qualification requirements are defined.

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APPENDIX A: (QT-400 SAMPLE DIMENSIONAL VERIFICATION)



**APPENDIX B: (P-10 EXPORTING CONDITIONS)**

**TERMS & CONDITIONS: EXPORTING**

- (a) **APPLICABLE LAWS** - SELLER shall comply with all applicable U.S. export control laws and economic sanctions laws and regulations (collectively referred to as "Trade Control Laws"), specifically including but not limited to the following:
  - a. International Traffic in Arms Regulations (ITAR), 22 C.F.R. 120 et seq.
  - b. The Export Administration Regulations, 15 C.F.R. 730-774; and
  - c. The Foreign Assets Control Regulations, 31 C.F.R. 500-598

**EXPORT LICENSING** - Without limiting these "Trade Control Laws", SELLER shall not transfer any export controlled item, technical data, technology, or service, including transfers to foreign persons employed by or associated with, or under contract to SELLER or SELLER's lower tier suppliers, unless authorized in advance by an export license.

- (b) **EXPORT CLASSIFICATION** - SELLER shall notify Q MICROWAVE if any deliverable under this Contract is restricted by applicable "Trade Control Laws":
  - a. SELLER represents that an official authorized to bind the SELLER has determined that the SELLER or the designer, manufacturer, supplier or other source of the deliverable has properly determined their export classification.
  - b. SELLER shall provide the export classification of any deliverable in writing to the Q MICROWAVE Procurement Representative before providing it to Q MICROWAVE.
  - c. SELLER shall provide export classification changes of any delivered items in writing to the Q MICROWAVE Procurement Representative.
- (c) **RESTRICTED PARTIES** - SELLER hereby represents that neither SELLER nor any parent, subsidiary or affiliate of SELLER is included on any of the restricted party lists maintained by the U.S. Government (collectively referred to as "Restricted Party Lists"), including:
  - a. The Specially Designated Nationals List administered by the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC"),
  - b. Denied Parties List, Unverified List or Entity List maintained by the U.S. Commerce Department's Bureau of Industry and Security ("BIS"), or
  - c. The List of Statutorily Debarred Parties maintained by the U.S. State Department's Directorate of Defense Trade Controls, or

**NOTIFICATION** - SELLER shall immediately notify the Q MICROWAVE Procurement Representative if SELLER, or any parent, subsidiary or affiliate of SELLER becomes listed on any "Restricted Party List" or export privileges are otherwise denied, suspended or revoked in whole or in part by any U.S. government entity or agency.

- (d) **REGISTRATION** - If SELLER is engaged in the business of manufacturing or brokering defense articles or services (whether exporting or not), SELLER represents that it is and will continue to be registered with the Directorate of Defense Trade Controls, as required by the ITAR, and it maintains an effective export/import compliance program in accordance with the ITAR.
- (e) **FLOWDOWN** - SELLER shall include paragraphs (a) through (e) of this clause or equivalent provisions in lower tier contracts for the items that will be included in work provided to Q MICROWAVE.  
**NOTIFICATION** - SELLER shall immediately notify Q MICROWAVE upon learning that any lower tier subcontractor with which it engages has become listed on the Restricted Parties List.
- (g) **LIABILITY** - SELLER shall be responsible for all losses, costs, claims, causes of action, damages, liabilities and expense, including attorneys' fees, all expense of litigation and/or settlement, and court costs, arising from any act or omission of SELLER, its officers, employees, agents, suppliers, or subcontractors at any tier, in the performance of any of its obligations under this clause.

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**APPENDIX C: (QP-300 SPECIAL PROCESS VENDOR LIST)**

<b>Special Process Vendors</b>	<b>Material Code / Type</b>	<b>Verification Delegated</b>	<b>Action / Condition Notes</b>
Anocote Metal Finishing	FNSH (Chem-film)	Chem-film	
Coastline Metal Finish	FNSH (Chem-film)	Plating	Nadcap cert
El Cajon Powder Coating	FNSH	Painting	
ENS Technology LLC	FNSH	Plating	
General Metal Finishing	FNSH	Plating	Ni Nadcap cert
Precision Plating Co.	FNSH	Plating	Nickel plating
Electrochem Solutions	FNSH	Plating	
Perfection Plating, Inc.	FNSH	Plating	
Prodigy Surface Tech.	FNSH	Plating	
Purecoat International	FNSH	Plating	Nadcap cert
The Lindgren Group	FNSH	Plating	
Makplate	FNSH	Plating	
HCC Ametek	FNSH	Plating	Nickel plating
Maryatt	ASSY	Laser Seal, Leak testing	
EB Industries	ASSY	Laser Seal, Leak testing	Nadcap cert



**APPENDIX D: APPLICABLE CLAUSES PER PO “CLAUSE FAMILY” LINE ITEM**

<b>Class</b>	<b>Clause Family Listed on PO</b>	<b>Applicable PO Clauses</b>
ACTV	000191-ACTV	Purchasing Clauses: P1-P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-104 Counterfeit Prevention, QC-105 DFARS Counterfeit, QC-106 ESD Packaging, QP-301 Pure Tin
ASSY	000191-ASSY	Purchasing Clauses: P1-P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-104 Counterfeit Prevention, QC-105 DFARS Counterfeit, QC-106 ESD Packaging, QC-107 ESD Handling, QP-304 Soldering,
BLDG	000191-BLDG	Purchasing Clauses: P4, P5, P8
CALB	000191-CALB	Purchasing Clauses: P1- P8, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-103 Calibration
CAPX	000191-CAPX	Purchasing Clauses: P1- P8, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-103 Calibration
CERM	000191-CERM	Purchasing Clauses: P1-P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QT-401 Lot Data
CHEM	000191-CHEM	Purchasing Clauses: P4, P5, P8, P13, P14 QA Clauses: QM-204 Shelf Life, QM-207 Hazardous Shipments
CMIL	000191-CMIL	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-200 Material Certifications, QM-201 DFARS Specialty Metals, QP-300 Special Process Vendors, QP-301 Pure Tin, QP-302 Thickness, QP-303 Baking, QT-400 Recorded Dimensions
CSA	000191-CSA	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QP-301 Pure Tin, QT-402 Sample Data for 25 pcs
COIL	000191-COIL	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QT-401 Lot Data
CONN	000191-CONN	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-201 DFARS Specialty Metal
DIST	000191-DIST	Purchasing Clauses: P1- P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-104 Counterfeit Prevention, QC-105 DFARS Counterfeit, QC-106 ESD Packaging, QP-301 Pure Tin
EPOXY	000191-EPOXY	Purchasing Clauses: P1-P8, P10, P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-203 Shelf Life, QM-207 Hazardous Shipments
FDTH	000191-FDTH	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-201 DFARS Specialty Metal
FNSH	000191-FNSH	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QP-301 Pure Tin, QP-302 Thickness, QP-303 Baking, (all finishes except paint and Chem-Film)
FSTN	000191-FSTN	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-201 DFARS Specialty Metal
FXTR	000191-FXTR	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-200 Material Certifications, QM-201 DFARS Specialty Metal, QP-300 Special Process Vendors

<b>Class</b>	<b>Clause Family Listed on PO</b>	<b>Applicable PO Clauses</b>
MACH	000191-MACH	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-200 Material Certifications, QM-201 DFARS Specialty Metal, QT-400 Recorded Dimensions, apply to all products. QP-300 Special Process Vendors, QP-301 Pure Tin, QP-302 Thickness, QP-303 Baking, also apply to finished products
MARK	000191-MARK	Purchasing Clauses: P1-P8, P10, P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-203 Shelf Life, QM-207 Hazardous Shipments
MISC	000191-MISC	Purchasing Clauses: P4, P5, P8, P10, P11, P13, P14
MLC	000191-MLC	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-204 MLC Marking, QP-301 Pure Tin
OFFI	000191-OFFI	Purchasing Clauses: P4, P5, P8
PASS	000191-PASS	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QP-301 Pure Tin
QMIMACH	000191-QMIMACH	QA Clause: QT-400 Recorded Dimensions
RENT	000191-RENT	Purchasing Clauses: P1-P8 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-103 Calibration
RMTL	000191-RMTL	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-200 Material Certifications
SBST	000191-SBST	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QP-301 Pure Tin
SLDR	000191-SLDR	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QM-200 Material Certifications, QM-203 Shelf Life, QM-205 J-STD Compliance, QM-206 Solder Paste Shipment, QM-207 Hazardous Shipments
SUB	000191-SUB	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QP-301 Pure Tin
TEST	000191-TEST	Purchasing Clauses: P1, P2, P4, P5, P6, P8, P10, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QC-106 ESD Packaging, QC-107 ESD Handling
TOOL	000191-TOOL	Purchasing Clauses: P4, P5, P9
TORO	000191-TORO	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming, QT-401 Lot Data applies ONLY to PN 400914T16-17A
WIRE	000191-WIRE	Purchasing Clauses: P1-P11, P13, P14 QA Clauses: QC-100 QMS, QC-101 Records, QC-102 Non-Conforming