Prototype Inspection/Verification Requirements

Dimensional Results

Supplier's shall provide evidence that dimensional verification, as required by the design record (2D Drawing) and/or the Prototype Control Plan, has been completed and results indicate compliance with specified requirements. Unless otherwise specified, the minimum dimensional verification shall include:

*Sampling Inspection Plan**

Sampling inspection plans shall consider the process used to make the parts and the associated risks. In some cases 100% inspection will be required. Sampling requirements, including inspection method will be determined by GT Technologies Engineering. General guidelines are as follows:

- 100% Inspection for all dimensions on a minimum of 6 parts for each unique manufacturing process, examples: cavities, molds, patterns or dies; shall be completed for each batch/lot.
- Capability studies on all potential Special Characteristics, minimum 30 parts, for each unique manufacturing process, examples: cavities, molds, patterns or dies. If order quantities are less than 30 pieces, potential SC's shall be inspected 100%. In cases where there are no Special Characteristics identified on the design documents, suitable characteristics shall be selected. 100% inspection is required for characteristics not capable to 1.67Ppk.
- Sampling inspection on selected characteristics per table below. The Inspection Quantity shall be evenly distributed throughout the Batch/Lot Size and shall include the first and last part manufactured.

	Batch/Lot Size (as defined by responsible Engineer)						
	< 65	66-110	111-180	181-300	301-500	501-800	801-1300
Inspection Quantity	4	5	7	10	15	20	25

*Sampling inspection plans for measurement data per Military Standard 414 (ANSI/ASQ Z1.9, ISO 3951, Inspection Level III, 1% AQL, Normal inspection

- 100% Inspection for all potential significant characteristics as required by the design record (2D Drawing) and/or the Prototype Control Plan for Batch/Lot Sizes of less than 30 pieces or Capability Studies for Batch/Lot Sizes greater than 30 pieces.

The supplier shall indicate the date of the design record, change level, and any authorized engineering change document not yet incorporated in the design record (sketches, tracings, cross sections) to which the part was made. The report shall also include date parts were made and measured.

Submitted samples shall be identified (serialized) to allow traceability back to the dimensional inspection report.

A tracing shall be included when an optical comparator is necessary for inspection.

Note 1: All dimensions (except reference dimensions), characteristics, specifications and notes included in the design record and/or Prototype Control Plan should be listed in a convenient format with the actual results recorded. The Dimensional Results format per AIAG PPAP Manual or a checked print where the results are legibly written on a part drawing including cross-sections, tracings, or sketches as applicable may be utilized for this purpose. In all cases a ballooned drawing(s) shall accompany the report.

Note 2: Dimensional results typically do not apply to bulk materials.

Material Test Results

- The supplier shall perform tests for all part(s) and product material(s) when chemical, physical, metallurgical requirements or cleanliness are specified by the design record and/or Prototype Control Plan. The minimum requirement for all Suppliers shall be to provide a copy of the Material Certification data for all parts.

The supplier shall indicate the design record change level of the parts tested, the number of parts tested, and the change level of the specifications.

Note: Material test results typically do not apply to supplier responsible components within an assembly.

Any deviations noted in the Dimensional Results and Records of Material or Performance Test Results must be Approved by the responsible GT Technologies Engineer prior to shipment of product