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**Key Characteristics (Special Characteristics)**

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**1. SCOPE****1.1. Content**

This document establishes the requirements and methodology for creating and using product and/or process management systems as a means to identify, communicate, maintain and control specific product and process characteristics.

**1.2. Application**

In recognition of the varying organizational structures and needs, business units may develop and use supporting specifications and/or procedures. However, such supporting documentation shall not conflict with or supersede this specification.

**1.3. Identification of Key Characteristics may come in various forms:**

- A. Specifically called out in Customer's contract/purchase order.
- B. Established during simultaneous engineering meetings (ex: Design/Process FMEA) and documented in the design review checklist.

**1.4. Intent of Key Characteristics (also referred to as special characteristics or critical to function characteristics)**

- A. Specific parameters of a product or process for which control and reduction of variation is needed to ensure satisfaction of Customer requirements.
- B. Identifies product feature(s) that significantly affect subsequent operations, product function, and/or Customer satisfaction.
- C. Determined by Responsible Design Organization (RDO), using input from the engineering reviews of design and process FMEAs, Engineering suggestions, discussions with Customer, and/or product management.
- D. Noted on the product drawing.
  - 1. When identified by Customer, the key characteristics should also be noted on Customer drawing.
  - 2. When identified on the product drawing, must be included in the quality inspection plans or quality control plan.
- E. Identified on the process control document or equivalent.

**2. PROCEDURE****2.1. Verify suitable data of the manufacturing process to meet the requirements of the Key Characteristic.**

- A. Work instructions shall be documented to manage sources of variation and establish a minimum acceptable capability.
- B. Data collection method(s) shall be defined to specify who, what, where, frequency and how many parts will be included and under what conditions the data will be collected and to identify sources of variation.

**NOTE**

*Changes to the approved work instructions or data collection plan shall be approved by the manufacturing location and the RDO.*

- C. A manufacturing process flowchart may be utilized, identifying key elements that influence variation. A disciplined review of each process generating Key Characteristics should be conducted to identify sources of variations and potential risks. Plans shall be developed to manage identified risks.

## 2.2. Analyze Data to Identify Appropriate Action

- A. If control charts are used, they should be reviewed to verify the stability of the process and/or opportunities for improvement.
- B. If the process remains stable, but the data does not meet the customer requirements, the common causes of variation must be investigated and resolved.
- C. If key characteristic requirements are not met, corrective action is required.



### **NOTE**

*Product that does not meet the requirements of the Key Characteristic may not be shipped without an approved deviation.*

## 2.3. Take Action as Needed

- A. When a process is no longer stable, and the root cause is known, corrective action shall be taken and the root cause eliminated.
- B. Key characteristics shall be continuously monitored for performance to requirements in accordance with the data collection plan.