



International Electronics Manufacturing Initiative

SMT Reel Labeling Project Overview



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- **Electronic Component package labeling is critical to enable verification and/or tracking of the following :**
 - **Correct SMT machine set-up**
 - **Moisture sensitive device exposure time**
 - **Component traceability**
 - **Real-time Inventory**
- **Some OEMs and EMS providers tend to develop their own company specific labeling specifications**
- **Leading to higher component costs and sometimes error prone due to re-labeling**

- **Develop an industry guideline for labeling automatically placed electronic component packages (e.g. Tape & Reel, Ammo Pack, Matrix Trays, etc) that meets the needs of electronics industry OEM/EMS companies.**

- **The group's efforts will initially focus on defining the following:**
 - **Minimum label content required**
 - **Example: Unique Trace Identifier (Could include supplier DUNS # and unique sequence number)**
 - **Data identifiers to be used for each piece of information**
 - **Acceptable bar code symbologies and/or RFID**
 - **2D symbologies, define field separators**
 - **Label location on each different package type**
 - **Acceptable bar code quality requirements**
 - **Polarity markings on label for capacitors, diodes, etc.**

- **Lead free (JEDEC Standard JESD97) and moisture sensitivity labeling requirements included in labeling guideline**
- **Guideline should also specify to what piece(s) of packaging this label should be applied**
- **The project group will not propose EDI requirement definition**

- **Collect data**
 - **Collect all applicable Industry Standards**
 - JEDEC Standard, JESD97
 - EIA 624 – Electronics Industries Association – Product Package Bar Code Label Standard for Non-Retail Applications
 - EIA 621 – Electronics Industries Association – Consumer Electronics Group Product and Packaging Bar Code Standard
 - Current activity being led by NEDA defining guideline for labeling product packages in the Distribution Environment
 - EPC (Extended Product Code) Global (epcglobalinc.org)
 - IEC 62090 – Product Package Labels for Electronic Components Using Bar Code and Two Dimensional Symbologies
 - ANSI MH10.8.6 – Packaging – Linear bar code and two-dimensional symbols for product packaging
 - ANSI MH10.8.7 – Labeling and Direct Product Marking with Linear Bar Code and Two-Dimensional
 - Data Content Standards
 - ANSI MH10.8.2 – Data Application Identifier Standard
 - ISO 15424 – Data Carrier / Symbology Identifiers
 - ISO 15459-2 – Automatic Identification and Data Capture Techniques – International Specification – Unique Identifier for Transport Units
 - ISO 15963 – Unique ID of RF Tag (Technical Report)
 - ANSI MH 10.8.3 / ISO 15434 – Transfer Data Syntax for High Capacity ADC Media

- **Conformance Standards Optically – Readable Media**
 - ISO 15415 – Bar Code Print Quality Test Specification – 2D Symbols
 - ISO 15416 – Bar Code Print Quality Test Specification – Linear Symbols
 - ISO 15426-1 – Verifier Conformance Spec – Linear
 - ISO 15426-2 – Verifier Conformance Spec – 2D
 - ISO 15423-1 – Scanner & Decoder Performance Testing – Linear
 - ISO 15423-2 – Scanner & Decoder Performance Testing – 2D
 - ISO 15419 – Digital Imaging, Printer Performance Testing & Bar Code Printing Software
 - ISO 15421 – Master Test Specification
- **Bar Code Symbology Specifications**
 - ISO 16388 – Code 39
 - ISO 15417 – Code 128
 - ISO 16022 – Data Matrix
 - ISO 15438 – PDF417
- **Team to define guidelines based on narrowing scope and better defining requirements specified in current industry standards – May 31, 2005**
- **Document and summarize – July 31, 2005**
- **Project completion – August 31, 2005**