

# LMSSC PACKAGING STANDARD

## PACKAGING OF ELECTRONIC SURFACE MOUNT COMPONENTS FOR AUTOMATIC PLACEMENT

### 1.0 SCOPE

This standard provides methods of packaging for shipping Electrostatic Sensitive Devices (ESD) and Non-ESD which can be installed using automated equipment.

### 2.0 REFERENCES

#### 2.1 LMSSC DOCUMENTS

~~6190 V0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13~~

MIL-DTL-19491, "Semiconductor Devices, Packaging of"

2.2.4 Code of Federal Regulations (CFR) Title 49

2.2.5 DOD-STD-1686, "Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)"

2.2.6 DOD-HNBK-263, "Electrostatic Discharge Control Handbook for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)."

#### 2.3 INDUSTRIAL DOCUMENTS

2.3.1 EIA-481, "Taping of Surface Mount Components for Automatic Placement"

2.3.2 Universal GS-297C, "Automatic Matrix Tray Changer"

2.3.3 JEDEC MO-094, "TapePak Molded Carrier Ring Family"

2.3.4 JEDEC 95 CO, Recommended Matrix Tray Tolerancing and Indexing

2.3.5 AA, "Barcode Symbology Standard for Code 39"

### 3.0 REQUIREMENTS

#### 3.1 GENERAL

3.1.1



3.2.1.6 The top cover tape for each carrier tape shall have peel strength of 0.4 to 0.7 newtons measured at 175°

### 3.2.4 TapePak Packaging

3.2.4.1 Package per JEDEC MO-094, "TapePak Molded Carrier Ring Family."

### 3.3 INTERMEDIATE PACKAGING

3.3.1 Consolidate tubes or rails of identical part number, manufacturer and lot number into a bundle, place bundle into a (static protective if needed) bag, and seal the bag. Place bagged tubes into an intermediate corrugated fiberboard container -- heed container size and weight specification limitations. Fill any voids with suitable non-particulate generating dunnage to prevent damage during handling and/or transporting.

3.3.2 Place individual reel, TapePak, or stack of matrix trays into a (static protective if needed) bag and seal. Place bags in corrugated fiberboard container -- heed container size and weight specification limitations. Fill any voids with suitable non-particulate generating dunnage to prevent damage during handling and/or transporting.

### 3.4 PACKING

3.4.1 Pack appropriate number of intermediate containers uniformly into each shipping container.

3.4.2 Shipping containers shall protect the item from damage during ordinary handling/shipping and shall meet the minimum requirements of common carriers for safe transportation (see contracting documents).

3.4.3 Intermediate containers which meet the requirements of 3.4.2 may be used as shipping containers.

3.4.4 Suppliers shall preserve and pack ESD hardware in accordance with requirements established in the Purchase Order, Statement of Work (SOW), Product Specification or Engineering Drawing.

3.4.5 LMSSC facilities shall preserve and pack ESD hardware in accordance with MPI-441008 and applicable Engineering Drawing Notes. Should there be a conflict between the requirements of this packaging standard and contractual requirements, the Contract shall take precedence.

### 3.5 MARKING (Unless otherwise specified in the contract or P.O. use the following criteria)

3.5.1 All marking shall be legible, uniform, durable and properly placed on containers to avoid loss of identity when package is opened and shall not be detrimental to dispensing for automated assembly of parts. Labels shall not be applied within 2" of either end of a tube or rail. Marking should be limited to that required by the PO or part specification.

3.5.2 Minimum marking on unit package shall include:

3.5.2.1 Nomenclature

3.5.2.2 Quantity per unit package

3.5.2.3 Suppliers/Manufacturer Identity (may be abbreviated but logo only is not acceptable.)

3.5.2.4 Lot date code (LDC), if applicable.

3.5.2.5 Part number per contracting document

3.5.2.6 Marking should be limited to that required by the PO or part specification.



## **5.0 NOTES**

### **Commodity**

Barrier Material, Electrostatic Protection

Label Electrostatic CAUTION (Pressure Sensitive)

Box Fiberboard

Tubes, Static Protective Plastic

Bag, Polyolefin

### **Material/Commercial Specifications**

MIL-PRF-81705, Type 1, Class 1

Commercially Available

ASTM D5118, Type CF, Class Domestic,  
SW, Style RSC, Grade 44 ECT or 200  
Mullen

Commercially Available (Suggestion:  
Thielex, Plastic Corp)

A-A-3174, Type 1, Class 1, Grade B