PROCESS SPECIFICATION

PART MARKING STANDARDS

PS00000019

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REVISION 02

Revision Page

Date	Rev	Author	Changes
05/12/2008	00	R. Williams	Original Release. New Part Marking Standards to include all part marking requirements from PS98006020 Metal Component Part Marking Standards, PS98003600 Circuit Board Labeling and PS00000017 Cable Marking.
01/10/2017	01	M. Rabayrol	- Revised section 5.8 to reflect unit marking requirements per 14 CFR Part 45.15. - Added UID label (section 5.9)
01/25/2018	02	A Kevichusa	Section 5.7.1 correction: Changed applicable spec from UL 94-V0 to UL 224 VW-1

1. PURPOSE and SCOPE

The purpose of this document is to describe the standard notes used to indicate part markings of materials manufactured for Universal Avionics Systems Corporation and products manufactured by Universal Avionics Systems Corporation.

2. APPLICABLE DOCUMENTS

None.

3. TERMS AND DEFINITIONS

Circuit Card Assembly (CCA) – A Printed Wire Board fully populated with its electronic components.

Printed Wire Board (PWB) – A printed board that provides point-to-point connections but not printed components in a predetermined arrangement on a common base.

Permanent Ink – Ink capable of providing a permanent mark that will withstand thermal ranges of 450 F to 510 F, and is resistant to alcohol, solvents, detergents and water.

UID label – **U**nique **ID**entification label

UII – **U**nique **I**tem **I**dentifier

Data matrix ECC 200 – Two-dimensional representation of ASCII (**A**merican **S**tandard **C**ode for **I**nformation **I**nterchange) characters.

4. PROCEDURE

NOTE: All part markings shall be in accordance with this document unless otherwise specified on the Engineering Drawings.

NOTE: Part marking locations must be applied on surfaces that are not visible when unit is fully assembled as specified on fabrication or assembly drawings.

5.1 Sheet Metal Parts

Permanently mark part number, lot or serial number, and UASC revision with .063-.125 high characters where shown using black permanent ink. Steel stamping or etching is acceptable.

5.2 Machined Parts

Permanently mark part number, lot or serial number, and UASC revision with .063-.125 high characters where shown using black permanent ink. Etching or machining acceptable.

5.3 Miscellaneous Parts

Parts where direct marking would be impractical due to their size, shape, material, or other parameter should be bagged and/ or tagged with part number, lot or serial number, and UASC revision with .125 high characters. Examples would include lamps, optical or glass parts, and elastomers.

5.4 Plastic or Parts Where Black Ink Would Not Be Legible

Permanently mark part number, lot or serial number, and UASC revision with .063 - .125 high characters where shown using white (or other high contrast color) permanent ink. Machining or Etching is not acceptable without prior consent from UASC.

5.5 Sub-Assemblies and Circuit Card Assemblies

Mark sub-assemblies and CCAs with part number, lot or serial number, and UASC revision 044 - .125 high characters where shown using contrasting permanent ink or adhesive backed labels. Location for markings on CCA's shall be per Manufacturing Instructions for ease of viewing after installation into a unit.

5.5.1 Adhesive backed Labeling materials and ink shall be capable of withstanding thermal ranges of 450 F to 510 F, be made from material with static dissipative properties, such as Polymide or Kapton material and resistant to alcohol, detergents and water. All labels shall be human readable and may also be Bar Coded using Uniform Symbology Specification Code 128.

5.6 Printed Wire Boards (PWB)

Markings to be in accordance with IPC-600 Class 3.

5.7 Cables and Wire Harnesses

Mark cables and Wire Harnesses with part number, lot or serial number, and UASC revision .044 - .10 high characters where shown with highly contrasting colors.

5.7.1 Heat Shrink
Heat shrink materials used for marking cables and wire harnesses shall have a flammability rating of UL 224 VW-1 or better and shall not slip or spin after shrinking.

5.7.2 Labels
See section 5.5.1 above for label requirements.

5.7.3 Wrap Around and Non-Wrap Around Flags
All wrap around flag type markings shall be nylon ties and use a label per 5.5.1 above on the flag. Hand written markings are not permissible.
Non-wrap around type flags shall not be used unless specified on the drawing.

5.8 Nameplates

Nameplates shall be made from Brady® Metallized Polyester material and shall contain the information as specified on the drawing. Reference Brady® Technical Data Sheet TDS No. B-486.

All Nameplates shall contain the UASC Part Number, UASC Symbol, UASC Serial Number, and TSO or PMA Markings as required by CFR 14 Part 45.15, and any other markings as required on the specific TSO for which the unit is certified to.

Locations shall be in accordance with the applicable assembly drawing or assembly work instructions.

5.9 UID labels

UID labels shall be made from Brady® Metallized Polyester and shall contain the following information or UII data elements:

- Issuing Agency Code (Cage Code)
- Enterprise Identifier
- Part Number
- Serial Number

These UII data elements are encoded in a UII symbol which is 2D Data Matrix ECC 200 symbol in the ISO/IEC 15434 syntax string.

The UII mark designates the physical representation of the UII Symbol when attached to the item for unique identification purposes.

Locations shall be in accordance with the applicable assembly drawing or assembly work instructions.

Reference Brady® Technical Data Sheet TDS No. B-486.