



UID INFORMATION

FOR ADDITIONAL INFORMATION OR
QUESTIONS PLEASE CONTACT YOUR
SUPPLIER QUALITY ENGINEER

UID RELATED TEXTRON SYSTEMS QUALITY CODES FOR SUPPLIERS

- **UIDR**
 - No Supplier Action required. Do not provide UID label or verification report.
- **UIDS1**
 - Supplier Action required. Supplier to provide UID Label as required. Supplier to upload UID information to <https://intranet.aaicorp.com/matrix/ADCL.html> per login instructions.
- **UIDS**
 - Supplier Action Required. Supplier to provide UID Label as required. Supplier to provide Quality Symbol Verification Report as required. Supplier to upload UID information to <https://intranet.aaicorp.com/matrix/ADCL.html> per login instructions.

Textron/AAI engineering drawings or parts list will designate marking as follows:

50301-40025-X-Y

Class
Method

The class and method designates the marking requirements on UID labels.

UID Quality Codes can be found at <http://www.textronsystems.com/who-we-are/supplier-info/purchase-order-codes>

UIDS1 & UIDS Codes also found in Appendix A.

Contact your Textron Systems Buyer if you did not receive a copy of 50301-40025 with the purchase order.

UID LABELS - METHOD & CLASS OF MARKING INFORMATION

- UID Label format to follow requirements of either the Engineering Drawing or Marking Specification 50301-40025 as applicable. UID labels shall be produced in accordance with the latest revision of MIL-STD-130. In the case of conflict between 50301-40025 and MIL-STD-130, MIL-STD-130 takes precedence.
- UID Label Methods & Class of Marking as described in Marking Specification 50301-40025* are:
 - Method B - Pressure Sensitive Label. An environment-resistant polyester or polyimide label backed with pressure sensitive adhesive is applied to the item. Marking applied by thermal transfer printing or laser printing. (This is the preferred method for Class 2 marking).
 - Method BA – Pressure Sensitive Label with acrylic adhesive required.

Specific Label Option: (Method B above is a non-specific adhesive type).

- Class 2 – Machine-Readable (MRI) with Human-Readable (HRI) “Translation” Information Marking (See Figure 1).
- Class 3 – Machine-Readable Information (MRI) Only – Limited Space (See Figure 2).

* Note: in the event the requirements shown in this slide conflict with 50301-40025, the current version of 50301-40025 takes precedence

FIGURE 1

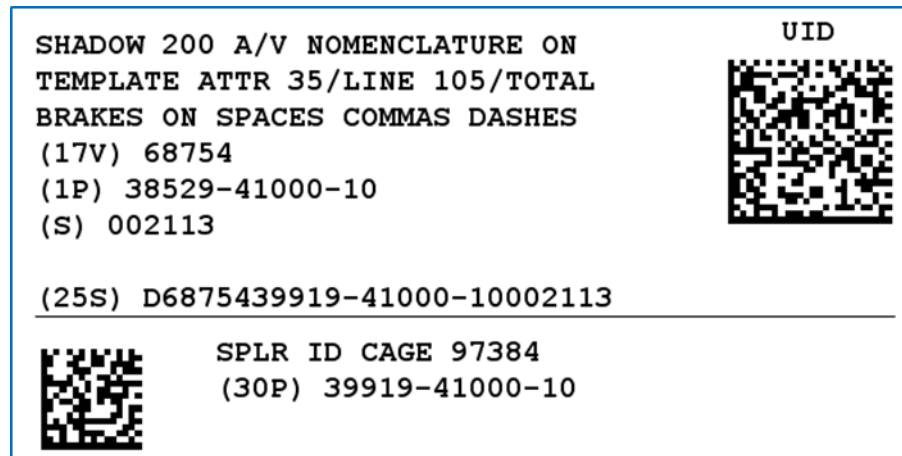


FIGURE 1
(Method B, Class 2 Standard Label options)
Provided as Example Only; Non Mandatory

FIGURE 2



FIGURE 2
(Method B, Class 3)
Limited space option

UID LABEL MATERIAL – SUGGESTED SOURCE OF SUPPLY

Recommended character and label size, ink and color are detailed below and have been chosen to meet MIL-STD-130. Equivalent materials and procedures may be used, provided the end result meets the requirements of MIL-STD-130. Suggested Source(s) of Supply as described in Marking Specification 50301-40025 are as follows:

- Method B Label Material – An environment-resistant label backed with pressure sensitive permanent rubber based adhesive.

- **Suggested Source(s) of Supply**

- Vendor CAGE: 85480 (W. H. Brady)

- Material: Ultra Aggressive Polyester Thermal Transfer Label (Brady Material # B-483)

- Label Color: White

- Part No.: THT-17-483-3

- Ribbon: R6000 or R49000 black thermal transfer ribbons



- Method BA Label Material – An environment-resistant label backed with pressure sensitive acrylic adhesive.

- **Suggested Source(s) of Supply**

- Vendor CAGE: 85480 (W. H. Brady)

- Material: Metallized Polyester Thermal Transfer Label (Brady Material # B-428)

- Label Color: Light Gray

- Part No.: THT-17-483-3

- Ribbon: R4302

ENCODING DATA MATRIX ON UID LABEL

- Unless otherwise specified on the drawing, or unless an existing UID mark is present, the Data elements shall be encoded in the Data Matrix symbol using the syntax of ISO/IEC 15434 and the semantics of ISO/IEC 15418, Format Code 06. (This method is compatible with the Item Unique Identification (IUID) marking requirements of MIL-STD-130). Data Identifiers (DIs) used shall be as follows (Unique Item Identifier Construct #2) as described in Marking Specification 50301-40025:

For Primary Data Matrix Symbol:

ENTERPRISE IDENTIFIER: **17V**
ORIGINAL PART NUMBER: **1P (Construct #2 only)**
SERIAL NUMBER: **S**

For Secondary Data Matrix Symbol:

CURRENT PART NUMBER: **30P**

ENCODED DATA MATRIX AND SUGGESTED SOFTWARE



[>RS06GS17V**0CVA5**GS1P**4202435**GSS**674A36458** RSEoT

What the scanner reads

D0CVA54202435674A36458

What you read

Cage

Part #

Serial #

Suggested Software for Printing

- Bartender, Codesoft 9 or newer, Self-produced or proprietary

UID LABEL SIZE & DATA MATRIX SIZE

- **UID Label Size:** When size is not specified on the engineering drawing and when preferred sizes below will not fit, size markings are to be compatible with the size of the part or assembly to be marked. Preferred Label Sizes as described in Marking Specification 50301-40025 are as follows:

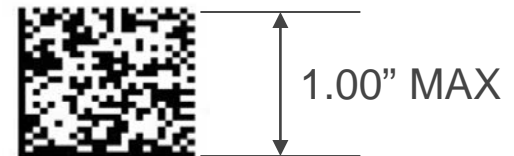
- Preferred Label Sizes:

- Class 2: 1.00 IN (H) x 2.00 IN (W)

- Class 3: .65 IN (H) x .65 IN (W)

- **Data Matrix Size:** The two-dimensional symbol shall be the Data Matrix ECC 200 in accordance with ISO/IEC 16022. Size of the symbol shall be per MIL-STD-130. Data Matrix Sizes as described in Marking Specification 50301-40025 are as follows:

- Square symbol sizes shall not exceed one inch on a side.



QUALITY SYMBOL VERIFICATION REPORT

Quality Symbol Verification Reports shall be produced and submitted with each shipment when a UIDS code is required per the PO.

In order to produce a Quality Symbol Verification Report to ensure the Data Matrix on a UID Label meets the Quality Grade parameters in accordance with MIL-STD-130 5.2.7 MRI Marking Quality and Marking Specification 50301-40025, a capable verification system must be in place.

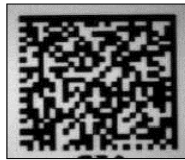
Suggested source(s) of supply are as follows:

- Cognex DataMan Verifiers
- Mircoscan Auto ID 2D Readers & Verifiers

*There are other capable systems available to produce verification reports and the suggested source(s) above are by no means a requirement.

EXAMPLES OF QUALITY SYMBOL VERIFICATION REPORTS

Serial number: 1A1526PB129336
Time Stamp: 12/4/2015 6:38:17 PM
Result Data: D9738439593-40002-602045
Overall: **PASS**
Quality Verification: **PASS**
Verification Result: DPM4/11/629/30Q
Specification: AIM-DPM
Symbology: Data Matrix
Image:



Detailed Results:

Quality Parameter	Result	Grade
Symbol Grade		A
Cell Modulation		A
Fixed Pattern Damage		A
Reference Decode		A
Minimum Reflectance	+68.83	A
Cell Contrast	+0.951	A
Axial Non-Uniformity	+0.020	A
Unused Error Correction	+1.000	A
Grid Non-Uniformity	+0.320	A
Cell Growth (CGH)	+14.278 mils	
Cell Growth (CGV)	+14.845 mils	

Pixels Per Cell: 10.21
Calibrated: Yes

FIGURE 3: Quality Symbol Verification

Serial number: 1A1526PB129336
Time Stamp: 12/4/2015 6:38:17 PM
Result Data: D9738439593-40002-602045
Data Validation: **PASS**
Specification: DoD UID Validation
Image:



Details:

Validation Parameter	Result
Concatenated UII	D9738439593-40002-602045
Data Qualifier Type	DI
Data Elements	25S D9738439593-40002-602045 17V 97384 1P 39593-40002-60 S 2045

FIGURE 4: Quality Symbol Verification per DoD UID Validation Specification

ASSOCIATED COST WITH UID LABELS

- Approximate cost to print labels in house including all necessary equipment and software
→ \$10,000 USD
- Suppliers that do not have the necessary equipment and software to produce UID Labels or Verification Reports have the option to outsource to other suppliers.* Possible suppliers and the cost to procure verified labels can be found here:
 - <http://www.camcode.com/uid-labels-2.html>
 - <http://www.quicklabel.com/applications/uid-labels.html>
 - <http://www.expresscorp.com/DOD-UID-Labels>
 - <http://www.idplate.com/category/uid-tags-uid-labels-and-identification-bar-code-labels>
 - <http://www.uidlabel.com/>
- Suppliers shall understand requirements of UID Labels prior to bidding on Textron Systems/AAI RFQ. Suppliers must understand requirements of UID Labels prior to procuring outsourced labels.

*Note: The list for possible suppliers and cost to procure verified labels is not a recommendation or approval to use any of these suppliers. Textron Systems is not responsible for the quality of labels or verification reports obtained by the suppliers above.

APPENDIX A: UIDS1 & UIDS

• UIDS1

- UID Label Required. Label format to follow requirements of either the Engineering Drawing or Marking Specification 50301-40025 as applicable. UID labels shall be produced in accordance with the latest revision of MIL-STD-130.
- UID markings shall be affixed to be easily accessible for scanning and visual verification unless otherwise noted on the applicable drawing(s).
- Supplier shall deliver an electronic file containing the UII values, using the format specified in the XML file provided in the subcontractors data package, to:
<https://intranet.aaicorp.com/matrix/ADCL.html> Refer to the instructions link on that page for additional information. A valid entry is required for each element where "N/A" is not present. If needed, contact your Textron Systems Supplier QE for assistance.

• UIDS

- UID Label Required. Label format to follow requirements of either the Engineering Drawing or Marking Specification 50301-40025 as applicable. UID labels shall be produced and verified in accordance with the latest revision of MIL-STD-130. Quality symbol verification reports shall be completed and submitted with each shipment IAW MIL-STD-130 5.2.7 MRI marking quality. Human readable information (except direct part markings) shall be legible and accurate. UID markings shall be affixed to be easily accessible for scanning and visual verification unless otherwise noted on the applicable drawing(s).
- Supplier shall deliver an electronic file containing the UII values, in the specified format, to:
<https://intranet.aaicorp.com/matrix/ADCL.html> Refer to the instructions link on that page for additional information. A valid entry is required for each element where "N/A" is not present. If needed, contact your Textron Systems Supplier QE for assistance.

Note: In the case of conflict between this text and the PO, the PO takes precedence.

APPENDIX B: REFERENCE DOCUMENTS

- Marking Specification 50301-44025
- MIL-STD-130: Identification Marking of U.S. Military Property
- MIL-STD-129: Military Marking for Shipment and Storage
- ISO/IEC 15434: Information technology - Automatic identification and data capture techniques - Syntax for high-capacity ADC media
- ISO/IEC 15418: Information Technology - EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance
- ISO/IEC 16022: Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification - CORR: June 30, 2009; CORR: June 30, 2011
- Department of Defense Guide to Uniquely Identifying Items
 - <http://dodprocurementtoolbox.com/cms/sites/default/files/resources/DoD%20Guide%20to%20Uniquely%20Identify%20Items%20v3.0.pdf>
- ISO/IEC TR 29158:2011- Direct Part Mark (DPM) Quality Guideline