

**Printronix Guide Specification  
RFID Label  
96 Bit, EPC Class 1  
Squiggle Antenna**



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**RFID Label Guide Specification  
96 Bit Class 1 Squiggle Antenna**

**182043-000 Rev A**

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## **RFID Label Guide Specification**

### **96 Bit, EPC Class 1, Squiggle Antenna**

#### **1. Scope**

- 1.1. This document provides guide specifications for developing converted 96 Bit, EPC Class 1, Squiggle Antenna RFID Smart Labels for use with Printronix SmartLine Series of RFID printers.
- 1.2. Target Applications
  - 1.2.1. Target application is supply chain logistics labeling using paper pressure-sensitive RFID labels.
- 1.3. Target RFID Printer Models
  - 1.3.1. Printronix SmartLine SL5000 series RFID Smart Label Printers. Printers are designed to encode, verify and print RFID labels.
  - 1.3.2. Printronix SmartLine SLPA7000 series RFID Smart Label Printer Applicator. Printers are designed to encode, verify, print and apply RFID labels.

#### **2. Disclaimer**

- 2.1. Notwithstanding anything to the contrary in this document, the guidelines, suggestions and other information included in this document or otherwise provided to the recipient, including the guidelines and suggestions for developing converted RFID labels, are provided by Printronix on an "as is" basis and without warranty of any kind whatsoever, express or implied. In particular, Printronix disclaims any implied warranty of merchantability or fitness for a particular purpose. Printronix will not be liable under any circumstances for any damages or losses related in any way to use of the guidelines, specifications or other information, including damages, which may be incurred as a result of labels not working properly in a specific application. All specifications subjective to change without notice. Testing of the converted labels in the printer is recommended prior to production quantities.

#### **3. Requirements**

- 3.1. Label Facestock
  - 3.1.1. Thermal Transfer printing mode – Coated label facestock designed for thermal transfer printing (Fasson Thermal Transfer 1C media or equivalent).
  - 3.1.2. Direct Thermal printing mode – Coated label facestock designed for direct thermal printing (Fasson DirectTherm 200HD or equivalent).
- 3.2. Liner
  - 3.2.1. 40 # bleached calendared Kraft stock.
- 3.3. Adhesive
  - 3.3.1. Permanent Acrylic or rubber based adhesives are acceptable
  - 3.3.2. Adhesive interface to liner shall be uniform and exhibit the same release characteristics along the full length of the label.

### 3.4. Perforations Between Labels

3.4.1. For SL5000 models – per user requirements except no perforations for Peel Mode.

3.4.2. For SLPA7000 models – no perforation between labels.

### 3.5. Roll Configurations

#### 3.5.1. SL5000 models

3.5.1.1. Inside core diameter: 3 inches

3.5.1.2. Outside roll diameter: 8" maximum

3.5.1.3. Label wind direction – label side out with orientation per Figure 1.

#### 3.5.2. SLPA7000 models

3.5.2.1. Inside core diameter: 3 inch core acceptable for label lengths less than 5" with inlay lengths less than 2". For inlays lengths greater than 2" and/or label lengths greater than 5" core diameter shall be 6".

3.5.2.2. Outside roll diameter: up to 12" maximum.

3.5.2.3. Label wind direction – label side out with orientation per Figure 1.

#### 3.5.3. General

3.5.3.1. Roll to be wound with sufficient tension to prevent telescoping during transit and handling.

3.5.3.2. Splices to use clear tape, should be angled and placed under the labels and not between.

### 3.6. Inlay

3.6.1. Inlay shall incorporate the Alien 96 bit, Class 1, Squiggle inlay.

### 3.7. Tag Programming

3.7.1. Optional enhancement as a guideline for maximum production throughput, program all good tags with a leading hex value of A5A5.

### 3.8. Label Construction

3.8.1. Inlay location with respect to label facestock outlined in Figure 1.

3.8.2. Nominal label facestock width with Squiggle inlay is 4.0". Maximum width of label construction supported by printer is 4.5" edge to edge (4.1" is printable).

3.8.3. Minimum supported label length with Squiggle inlay is 2.0". Longer label lengths per user requirements.

3.8.4. Inlay placement with respect to edge of liner is critical. It is acceptable to reduce the width of exposed liner along the right side of the label – see Figure 1.

#### 3.8.5. Gap Sensing

3.8.5.1. Nominal gap between labels for gap sensing is 0.125". Minimum gap supported is 0.10".

3.8.5.2. 1.0" minimum x 0.125" timing marks on the liner under the gap.

#### 3.8.6. Release Characteristics

3.8.6.1. Labels shall be able to dispense in a print and apply application.

### 3.9. Packaging and Handling

3.9.1. RFID labels are static sensitive devices and should be package and handled accordingly.

3.9.2. Avoid storing labels in elevated temperature environment.

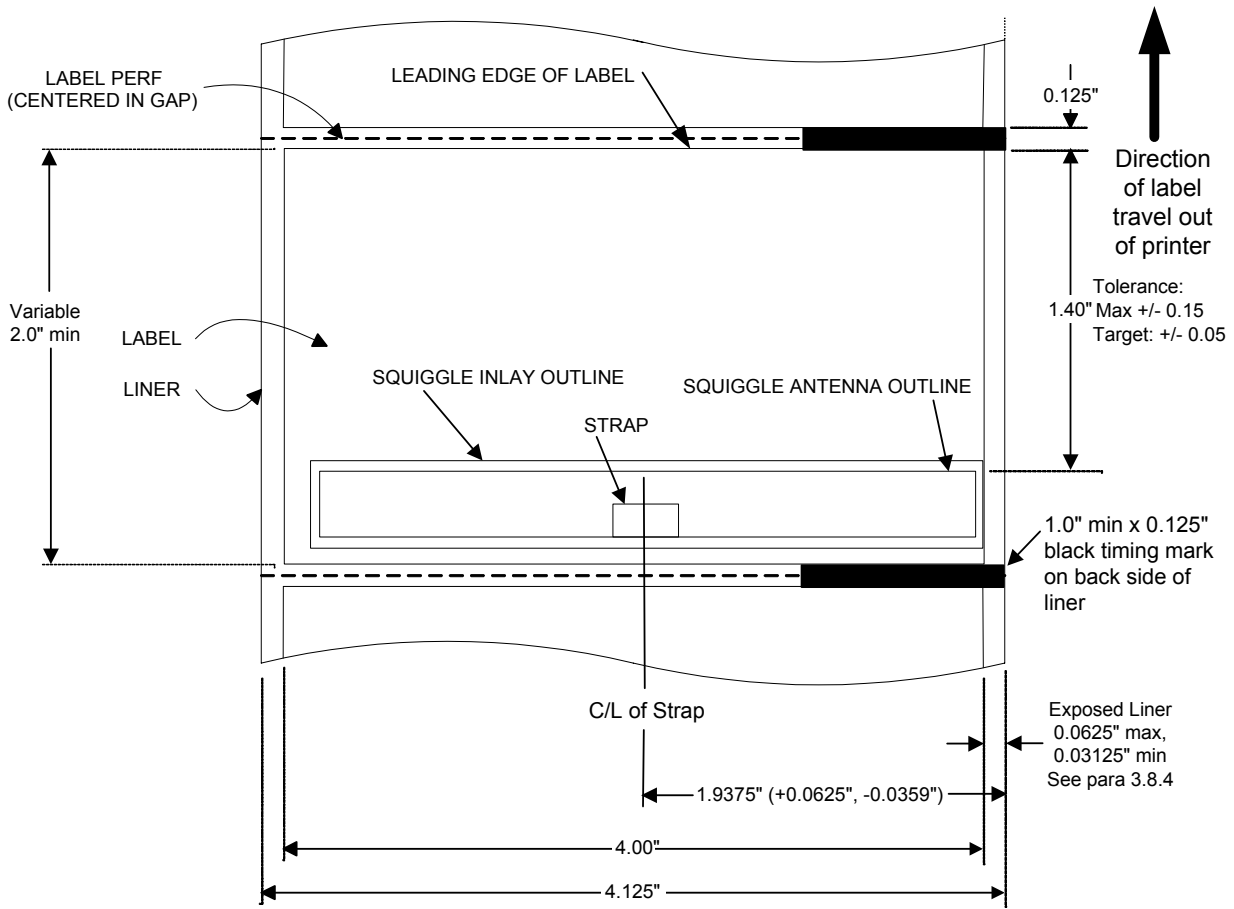
## 4. Thermal Transfer Ribbons for Printronix RFID Printers

4.1. Wax resin ribbon for best durability. Wax Resin Blend Ribbon 8500, 4.33" x 2051', package of 6 ribbons, Printronix part no. 203485-103.

4.2. General purpose wax ribbon. Wide Spectrum Wax Ribbon 8300, 4.33" x 2051', package of 6 ribbons, Printronix part No. 175391-103.

## 5. Contact Information

5.1. For comments or questions, please contact Bob Crum at [bcrum@printronix.com](mailto:bcrum@printronix.com) or 714-368-2505.



**Printronix RFID Squiggle Label Requirements  
for 4.0" Wide x Variable Length Label**

**Minimum Label Length: 2.0"**  
Viewed from Facestock Side

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All Dimensions in Inches

**Figure 1. Label Layout**

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