



DigiKey/SPS SSCC-18 Label Quick Reference

Doc Number: GDE-3634

Version: 2

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1.0 Purpose

This document outlines the requirements and structure of the Serialized Shipping Container Code (SSCC) label in accordance with ASN specifications set forth by DigiKey and SPS Commerce.

2.0 Guidelines

2.1 Label Field Requirements

1. The following fields are required or suggested on the License Plate Number (LPN), or Line Item (LI) label with like attributes. Barcodes require an Application Identifier (AI)

A. Required Data (10 to 16pt font, unless expressed otherwise)

1. From Address: Vendor's ship from name and address (10 to 12 pt font)
2. To Address: Ship to name and address (10 to 12 pt font)
3. Ship To postal code and barcode
 - a. Barcode: GS1-128 symbology
 - b. GS1-128, Data Identifier: 420
4. DigiKey PO Number and Barcode
 - a. Barcode: Code-128 symbology
 - b. Application Identifier: K
5. Vender/Supplier Part Number and barcode
 - a. Barcode: Code-128 symbology
 - b. Application Identifier: 1P
6. SSCC-18 number and barcode
 - a. Barcode: GS1-128 symbology, 18-digit length (Excluding AI)
 - b. Application Identifier: 00

B. Optional Data (Shown with red text in label sample, 10 to 16pt font)

1. Shipment Information
 - a. Carrier Name
 - b. Progressive Number (PRO #)
 - c. Bill of Lading Number (B/L Number)
 - d. Carton or Pallet count (Cartons/Pallet)
2. Lot Number, displayed with N/T if Not Traceable
3. Date Code, displayed in 4-digit YYWW format, or N/T if Not Traceable
4. Universal Product Code (UPC #)
5. Stock Keeping Unit (SKU #)
6. Carton Quantity – count of individual pieces within carton
7. Manufactured Date (MFG DATE)
8. Expiration Date (MFG Date)



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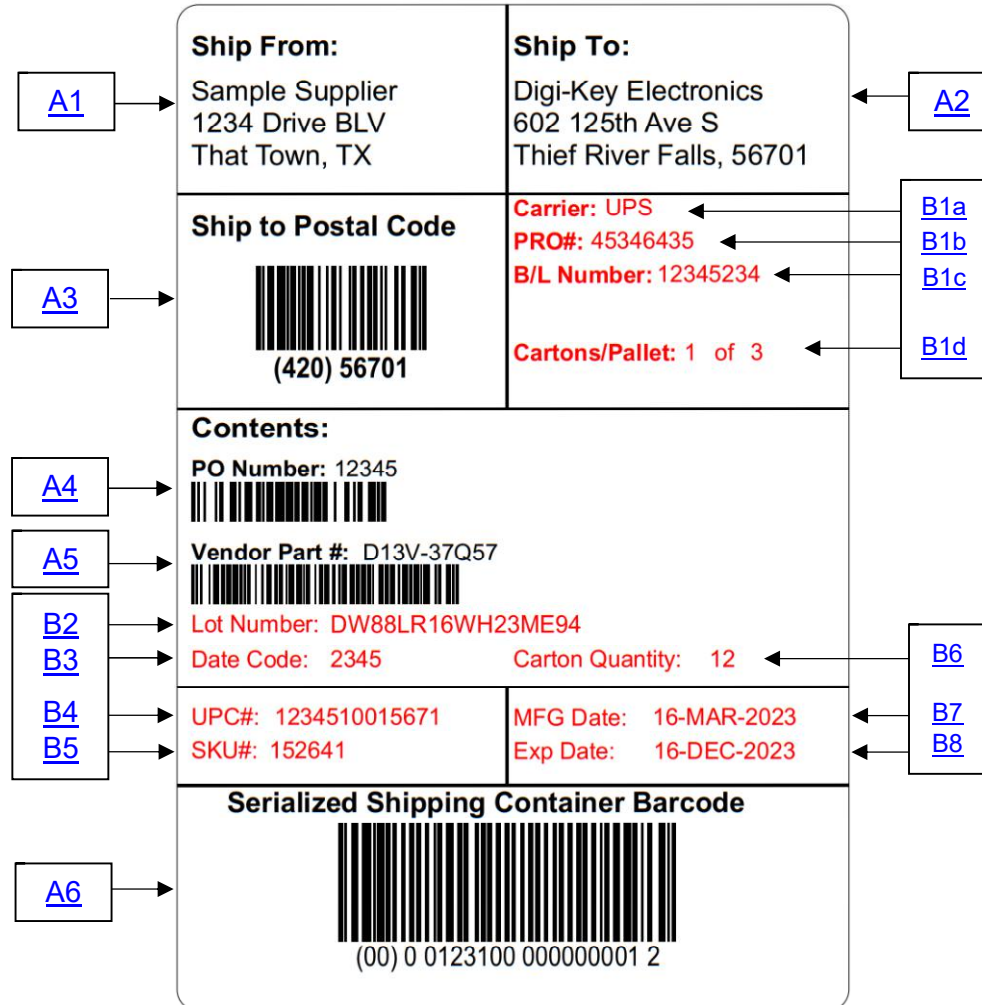
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2. SSCC Label:



Note: Text in red is optional data and may be excluded from label if not used. Text in blue is required if applicable to the product.

3. SSCC ID Data structure

A. The SSCC number and barcode is structured as follows:

1. **Application Identifier** (2 digits): 00 to indicate an SSCC ID.
2. **Extension Digit** (1 digit, 0-9): Used to increase capacity of the Serial Reference.
3. **GS1 Company Prefix**: A globally unique number issued to a GS1 member company. This is assigned through the GS1 US application. ([See section 4](#))
4. **Serial Reference**: The number allocated to identify a logistic or shipping unit.
5. **Check Digit**: A modulo 10-digit used to check for input errors. ([See section 3.C](#))



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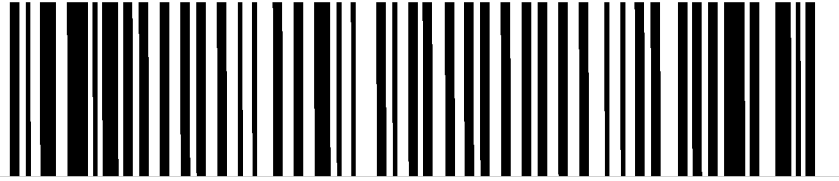
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B. SSCC-18 Example



(00) 0 0042273 000000113 1

1. Barcode Scan should read: 00000422730000001131

C. Check Digit Calculation

1. The check digit is calculated using the following steps:

- a. Multiply the numbers in positions one, three, five, seven, nine, eleven, thirteen, fifteen, and seventeen by 3, then add together.
 - i. Using the above example: $0+0+6+21+0+0+0+3+9=39$
- b. Add the numbers in positions two, four, six, eight, ten, twelve, fourteen, and sixteen.
 - i. $0+4+2+3+0+0+0+1 = 10$
- c. Add the results of step a and step b.
 - i. $39+10 = 49$
- d. The Check Digit is the smallest number needed to round the result from step c up to a multiple of 10.
 - i. $49+1 = 50$, thus check digit is 1
- e. This can be confirmed by setting up a table with 18 columns, 1 column for each digit within the sequence and the 18th column reserved for the check digit.

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SSCC ID	0	0	0	4	2	2	7	3	0	0	0	0	0	0	1	1	3	√
	0		0		6		21		0		0		0		3		9	
Step a	Multiply values in positions 1, 3, 5, 7, 9, 11, 13, 15, 17, then add values (example: 39)																	
		0		4		2		3		0		0		0		1		
Step b	Add values in positions 2, 4, 6, 8, 10, 12, 14, 16 (example: 10)																	
Step c	Add steps a & b (example: $39+10 = 49$)																	
Step d	Step d result rounded up to the nearest multiple of 10, minus step d result (example: 49 rounded up to 50 , $50-49 = 1$)																	1

Note: Barcoding software capable of GS1-128 SSCC barcodes have the capability to calculate the check digit automatically.

4. GS1 Company Prefix

A. The GS1 Company prefix is assigned through the GS1 application site. An overview of the GS1 US Serial Shipping Container Code (SSCC) can be [found here](#).

1. Alternatively: <https://www.gs1.org/standards/id-keys/sscc>



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Reference

No records to display.