# Tape and Reel Specifications

## Description

Surface-mounted devices are packaged in embossed tape and wound onto reels for shipment in compliance with Electronics Industries Association Standard EIA-481 Rev. A.

## Specifications

### Cover Tape

- The cover tape may not extend past the edge of the carrier tapes
- The cover tape shall not cover any part of any sprocket hole.
- The seal of the cover tape to the carrier tape is uniform, with the seal extending over 100% of the length of each pocket, on each side.
- The force to peel back the cover tape from the carrier tape shall be: 30 gms minimal, 70 gms nominal, 100 gms maximal, at a pull-back speed of 300 ± 10 mm/min.

### Loading the Reel

Empty pockets are not permitted between the first and last filled pockets on the tape.

The surface-mount devices are placed in the carrier tape with the leads down, as shown in *Figure 1*.

### Leaders and Trailers

The carrier tape and the cover tape may not be spliced. Both tapes must be one single uninterrupted piece from end to end.

Both ends of the tape must have empty pockets meeting the following minimum requirements:

- Trailer end (inside hub of reel) is 300 mm minimum
- Leader end (outside of reel) is 500 mm min., 560 mm max.
- Unfilled leader and trailer pockets are sealed
- Leaders and trailers are taped to tape and hub respectively using conductive tape

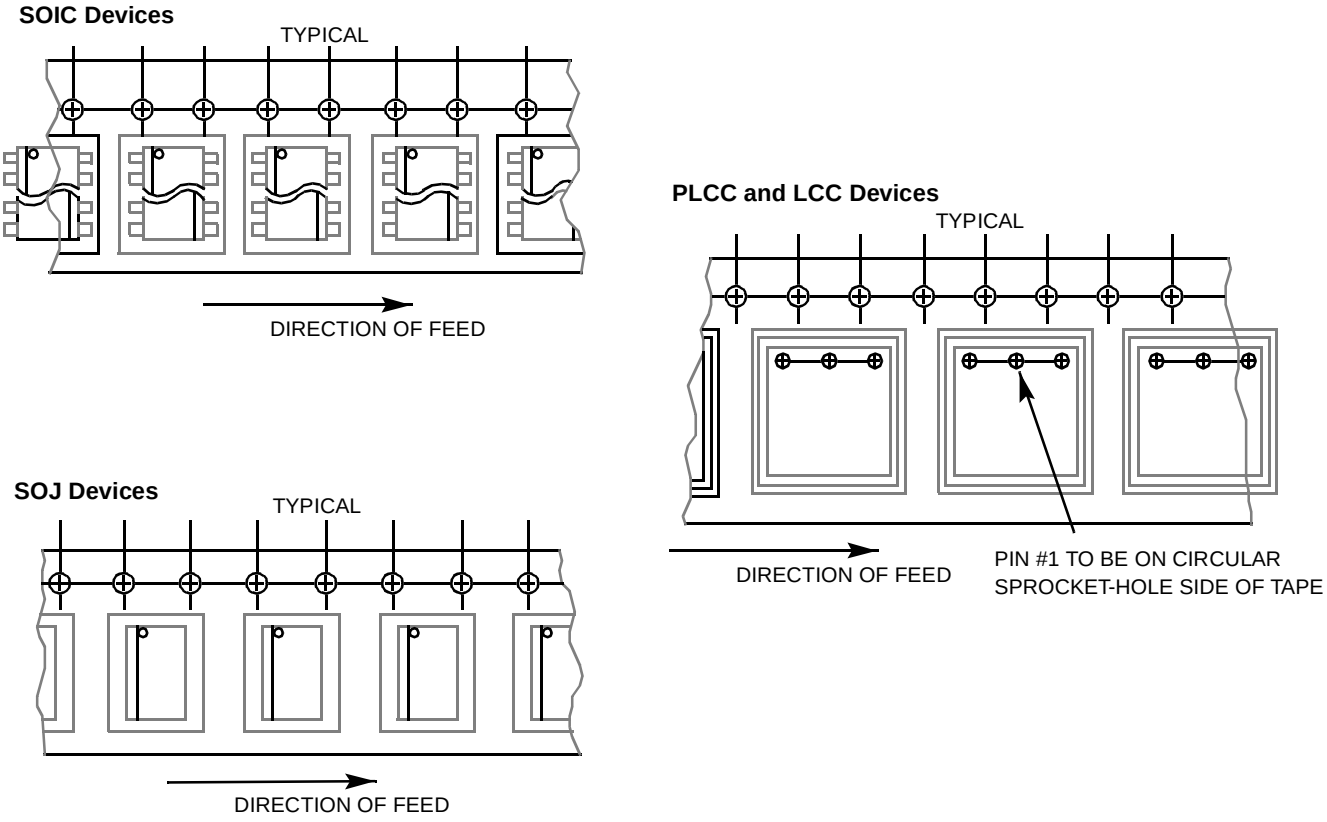



**Figure 1. Part Orientation in Carrier Tape**

### Packaging

- Full reels contain a standard number of units (refer to *Table 1*). Each reel has a 3” hub unless otherwise noted in table.
- Reels may contain up to 4 mark lots. However, in case low yield is encountered an additional lot may be added.
- Each reel is packed in an anti-static/moisture barrier bag and then in its own individual box.
- Labels are placed on each reel as shown in *Figure 2*. The information on the label consists of a minimum of the following information, which complies with EIA 556, “Shipping and Receiving Transaction Bar Code Label Standard”:
  - — Barcoded Information:
    Customer PO number
    Quantity
    Date code
  - — Human Readable Only:
    Package count (number of reels per order)
    Description
    “Cypress-San Jose”
    Cypress p/n
    Cypress CS number (if applicable)
    Customer p/n
- Each box will contain an identical label plus an ESD warning label.

## Ordering Information

CY7Cxxx-yyzzz

xxx = part type

yy = speed

zzz = package, temperature, and options

SCT = SOIC, commercial temperature range
SIT = SOIC, industrial temperature range
SCR = SOIC, commercial temperature plus burn-in
SIR = SOIC, industrial temperature plus burn-in
VCT = SOJ, commercial temperature range
VIT = SOJ, industrial temperature range
VCR = SOJ, commercial temperature plus burn-in
VIR = SOJ, industrial temperature plus burn-in
JCT = PLCC, commercial temperature range
JIT = PLCC, industrial temperature range
JCR = PLCC, commercial temperature range plus burn-in
JIR = PLCC, industrial temperature range plus burn-in

Notes:

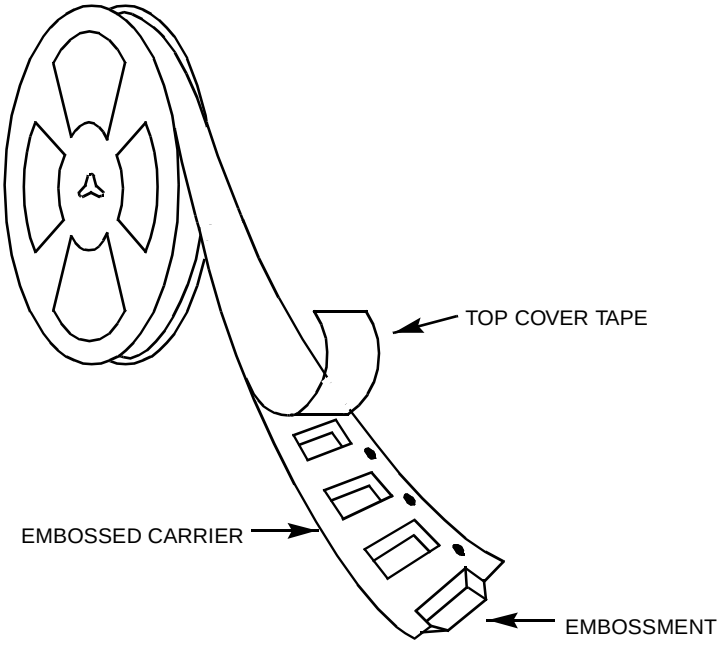
1. The T or R suffix will not be marked on the device. Units will be marked the same as parts in a tube.
2. Order releases must be in full-reel multiples as listed in *Table 1.*

**Table 1. Parts Per Reel and Tape Specifications**

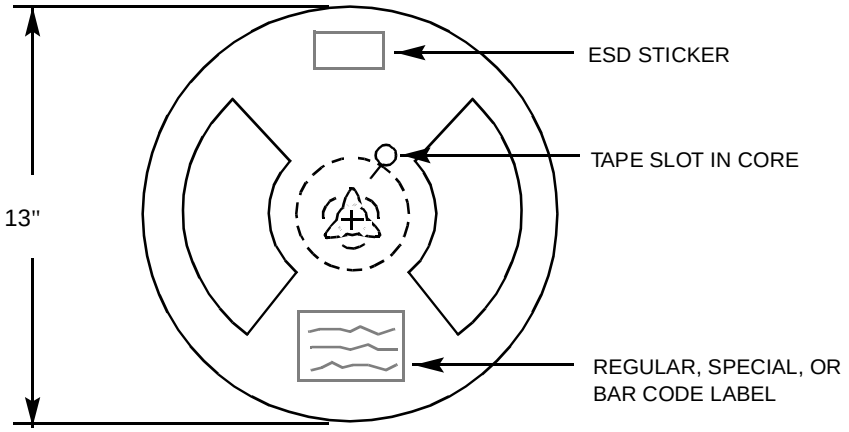
| Package Type | Lead Count | Carrier Width (mm) | Part Pitch (mm) | Parts Per Full Reel | Minimum Partial Quantity |
|---|---|---|---|---|---|
| BGA | 36 | 16 | 12 | 2,000 | 500 |
| | 48 (7 x 8.5 mm) | 16 | 12 | 2,000 | 500 |
| | 48 (7 x 7 mm) | 16 | 12 | 2,000 | 500 |
| PLCC | 20 | 16 | 12 | 1,000 | 250 |
| | 28 | 24 | 16 | 750 | 188 |
| | 32R | 24 | 16 | 750 | 188 |
| | 44 | 32 | 24 | 500 | 125 |
| | 52 | 32 | 24 | 350 (Uses 7” hub) | 125 |
| | 68 | 44 | 32 | 250 (Uses 6” hub) | 63 |
| | 84 | 44 | 36 | 250 (Uses 6” hub) | 63 |
| PQFP | 44 | 24 | 16 | 750 | 188 |
| | 52 | 24 | 16 | 750 | 188 |
| | 64 | 32 | 24 | 750 | 188 |
| | 80 | 34 | 24 | 750 | 188 |
| QSOP | 16 | 12 | 8 | 2,000 (Uses 7” hub) | 500 |
| | 20 | 16 | 8 | 2,000 (Uses 7” hub) | 500 |
| | 24 | 16 | 8 | 2,000 (Uses 7” hub) | 500 |

**Table 1. Parts Per Reel and Tape Specifications** (continued)

| Package Type | Lead Count | Carrier Width (mm) | Part Pitch (mm) | Parts Per Full Reel | Minimum Partial Quantity |
|---|---|---|---|---|---|
| SOIC | 8 | 12 | 8 | 2,500 | 625 |
| | 14 | 16 | 8 | 2,500 | 625 |
| | 16 (150 mil) | 16 | 8 | 2,500 | 625 |
| | 16 (300 mil) | 16 | 8 | 1,000 | 250 |
| | 18 | 24 | 16 | 1,000 | 250 |
| | 20 | 24 | 12 | 1,000 | 250 |
| | 24 | 24 | 12 | 1,000 | 250 |
| | 28 (300 mil) | 24 | 12 | 1,000 | 250 |
| | 28 (330 mil) | 24 | 12 | 1,000 | 250 |
| | 28 (400 mil) | 24 | 16 | 1,000 | 250 |
| | 32 (400 mil) | N/A | N/A | N/A | N/A |
| | 32 (450 mil) | 32 | 16 | 1,000 | 250 |
| SOJ | 20 | 24 | 12 | 1,000 | 250 |
| | 24 | 24 | 12 | 1,000 | 250 |
| | 28 (300 mil) | 24 | 12 | 1,000 | 250 |
| | 28 (400 mil) | 32 | 16 | 750 | 188 |
| | 32L (300 mil) | 32 | 16 | 1,000 | 250 |
| | 32 (400 mil) | 32 | 16 | 750 | 188 |
| | 36 | 44 | 16 | 500 (Uses 7” hub) | 125 |
| | 44 | 44 | 16 | 500 (Uses 7” hub) | 125 |
| SSOP | 20 | 16 | 12 | 2,000 | 500 |
| | 28 | 16 | 12 | 2,000 | 500 |
| | 34 | 24 | 12 | 1,000 | 250 |
| | 48 | 32 | 16 | 1,000 | 250 |
| | 56 | 32 | 16 | 1,000 | 250 |
| STSOP | 32 | 24 | 12 | 1,500 (Uses 7” hub) | 375 |
| TQFP | 32 | 16 | 12 | 2,000 | 500 |
| | 44 | 24 | 16 | 1,500 | 375 |
| | 64 (395 mil) | 24 | 16 | 1,500 | 375 |
| | 64 (550 mil) | 24 | 20 | 1,500 | 375 |
| | 80 | 24 | 20 | 1,500 | 375 |
| | 100 (550 mil) | 24 | 20 | 1,500 | 375 |
| | 100 (787 mil) | 44 | 24 | 750 (Uses 7” hub) | 187 |
| TSOP | 28 | 24 | 12 | 1,500 (Uses 7” hub) | 375 |
| | 28/R | 24 | 12 | 1,500 (Uses 7” hub) | 375 |
| | 32 | 32 | 12 | 1,500 (Uses 7” hub) | 375 |
| | 32/R | 32 | 12 | 1,500 (Uses 7” hub) | 375 |
| | 44 / 2 | 32 | 16 | 1,500 (Uses 7” hub) | 250 |
| TSSOP | 16 | 16 | 8 | 2,500 (Uses 7” hub) | 625 |
| | 20 | 16 | 8 | 1,000 (Uses 7” hub) | 250 |
| | 48 | 24 | 12 | 2,000 (Uses 7” hub) | 500 |
| | 56 | 24 | 12 | 2,000 (Uses 7” hub) | 250 |




**Tape and Reel Shipping Medium**




**Label Placement**

**Figure 2. Shipping Medium and Label Placement**

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