

Mechanical Data

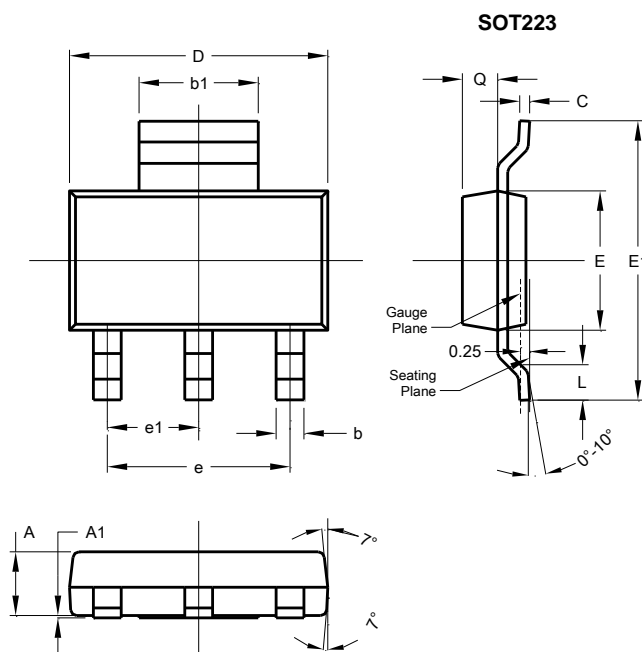
- Surface Mount Package
- Case Material: Molded Plastic,
UL Flammability Rating 94V-0
- Terminals: Finish - Matte Tin.
Solderable per MIL-STD-202, Method 208^(e3)
- Weight: 0.112 grams (Approximate)

Package View



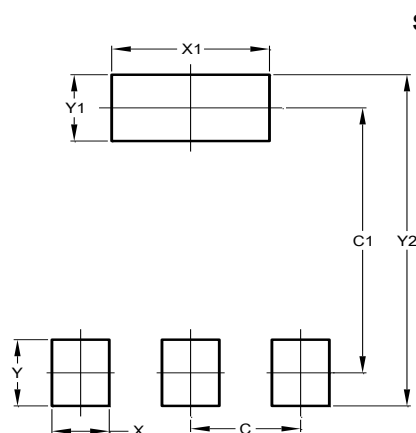
Top View

Package Outline Dimensions



| SOT223 | | | |
|----------------------|-------|------|------|
| Dim | Min | Max | Typ |
| A | 1.55 | 1.65 | 1.60 |
| A1 | 0.010 | 0.15 | 0.05 |
| b | 0.60 | 0.80 | 0.70 |
| b1 | 2.90 | 3.10 | 3.00 |
| C | 0.20 | 0.30 | 0.25 |
| D | 6.45 | 6.55 | 6.50 |
| E | 3.45 | 3.55 | 3.50 |
| E1 | 6.90 | 7.10 | 7.00 |
| e | - | - | 4.60 |
| e1 | - | - | 2.30 |
| L | 0.85 | 1.05 | 0.95 |
| Q | 0.84 | 0.94 | 0.89 |
| All Dimensions in mm | | | |

Suggested Pad Layout



| Dimensions | Value (in mm) |
|------------|---------------|
| C | 2.30 |
| C1 | 6.40 |
| X | 1.20 |
| X1 | 3.30 |
| Y | 1.60 |
| Y1 | 1.60 |
| Y2 | 8.00 |

Note: The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary depending on application. These dimensions may be modified based on user equipment capability or fabrication criteria. A more robust pattern may be desired for wave soldering and is calculated by adding 0.2 mm to the 'Z' dimension. For further information, please reference document IPC-7351A, Naming Convention for Standard SMT Land Patterns, and for International grid details, please see document IEC, Publication 97.

Note: For high voltage applications, the appropriate industry sector guidelines should be considered with regards to creepage and clearance distances between device Terminals and PCB tracking.

Minimum Packing Quantity

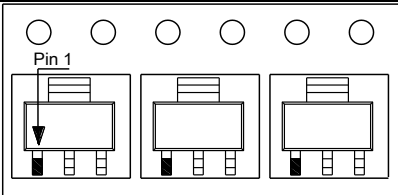
| | Quantity | Tape Width | Part Number Suffix |
|----------|----------|------------|--------------------|
| Tube | 75 | | |
| 7" Reel | 1,000 | 12mm | TA |
| 13" Reel | 2,500 | 12mm | -13 |
| 13" Reel | 4,000 | 12mm | TC |

Note: Package quantities given are for minimum packaging quantity only, not minimum order quantity. For minimum order quantity, please contact Sales Department.

Note: No mixed date codes or partial quantity (less than minimum packaging quantity) per packaging is allowed.

Note: In no case shall there be two or more consecutive components missing from any reel for any reason.

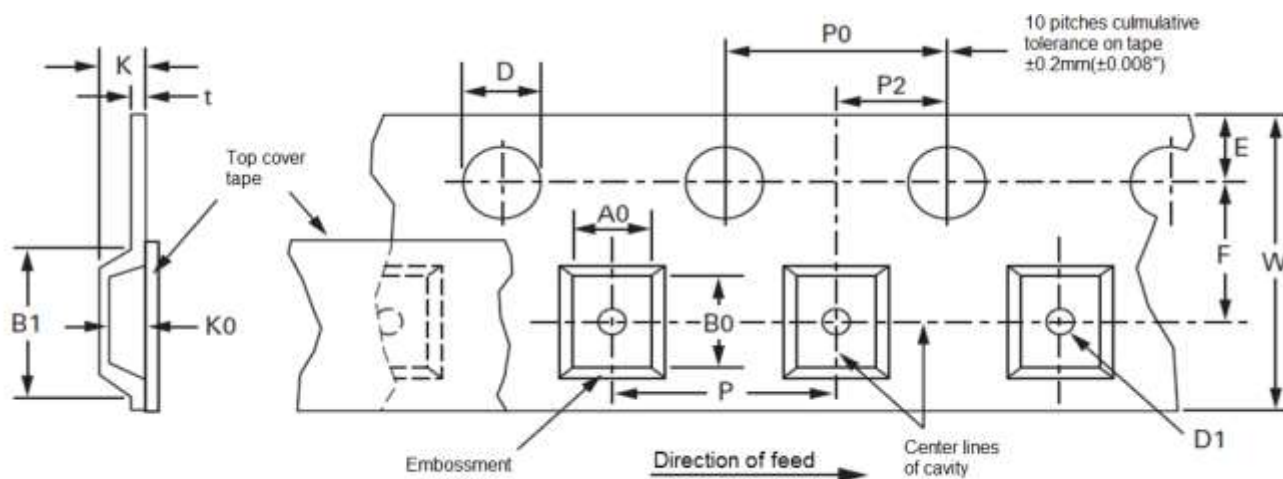
Device Tape Orientation

| Tape Width | Part Number Suffix | Tape Orientation |
|------------|--------------------|---|
| 12mm | -13 TA TC |  <p>Direction of feed</p> |

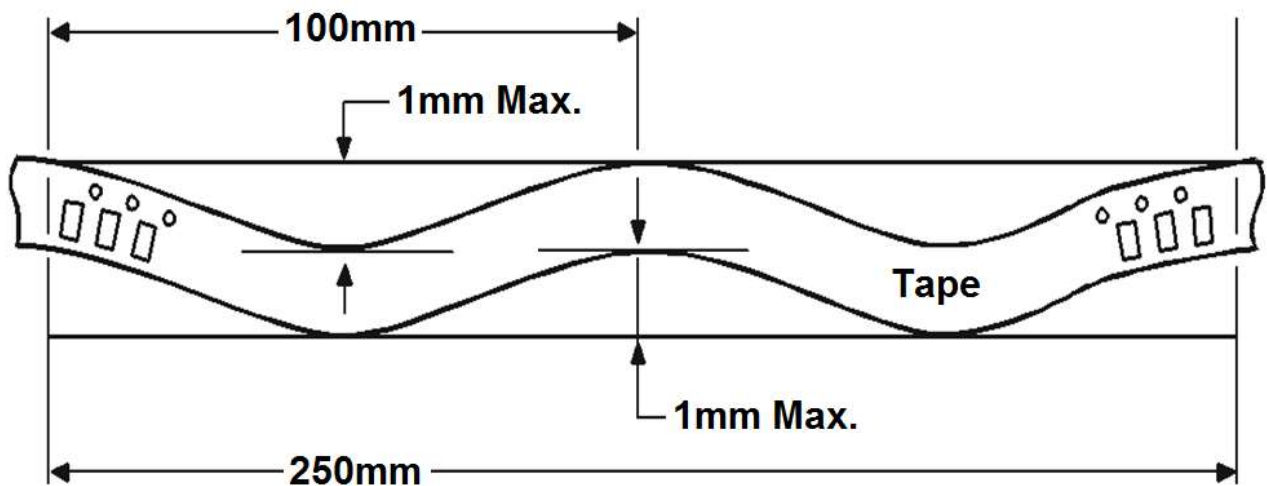
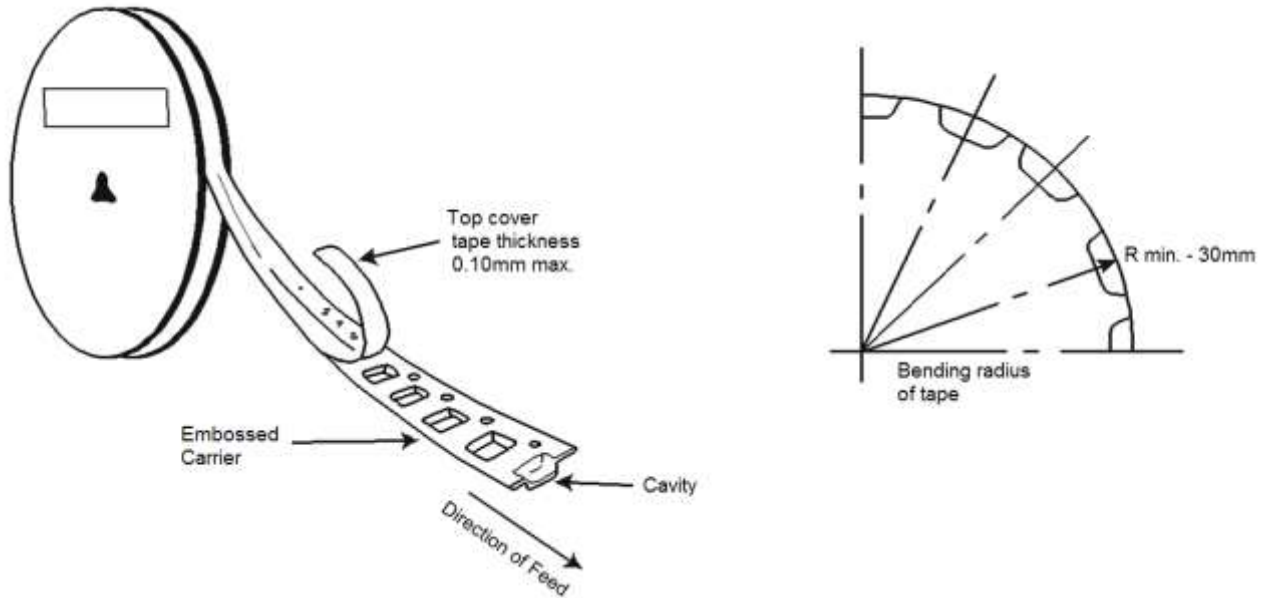
Note: For part marking, refer to product datasheet.

Note: Tape and package drawings are not to scale and are shown for device tape orientation only.

Embossed Carrier Tape Specifications



| Tape Width (W) | Dimension | Value (mm) | Dimension | Value (mm) | Dimension | Value (mm) |
|----------------|-----------|---|-----------|------------|-----------|------------|
| 12mm | B1 | 8.2 max. | F | 5.5±0.05 | P2 | 2.0±0.05 |
| | D | 1.5+0.10 -0.0 | K | 4.5 max. | t | 0.40 max. |
| | D1 | 1.5 min. | P | 8.0±0.10 | W | 12±0.30 |
| | E | 1.75±0.10 | P0 | 4.0±0.10 | | |
| | A0 B0 K0 | Determined by component size. The clearance between the component and the cavity must comply to the rotational and lateral movement requirement provided in figures in the "Maximum Component Movement in Tape Pocket" section. | | | | |

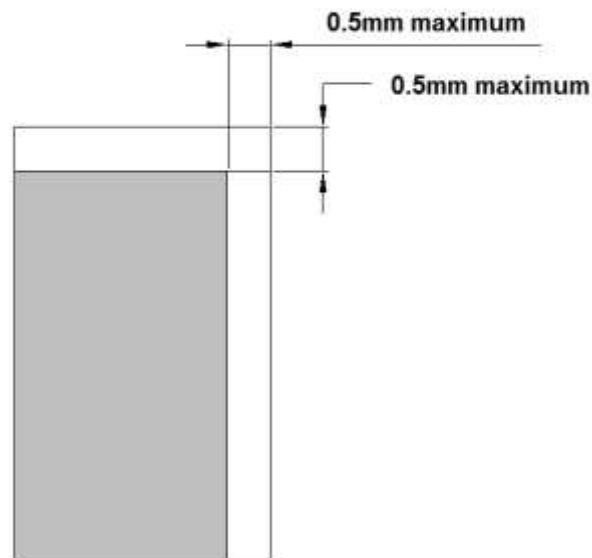


Camber (Top View)

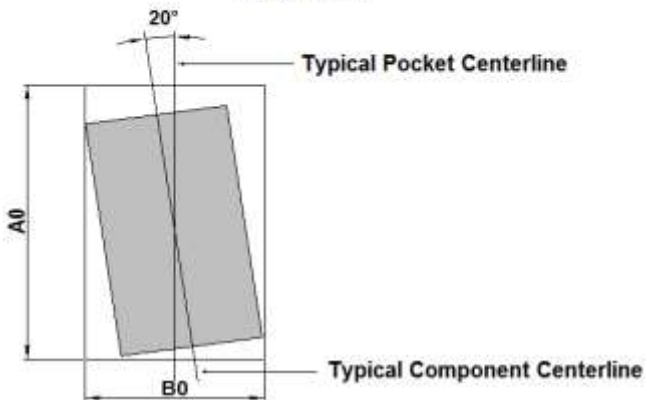
Allowable camber to be 1mm/100mm tape, non-cumulative

Maximum Component Movement in Tape Pocket

Component Lateral Movement 12mm Tape



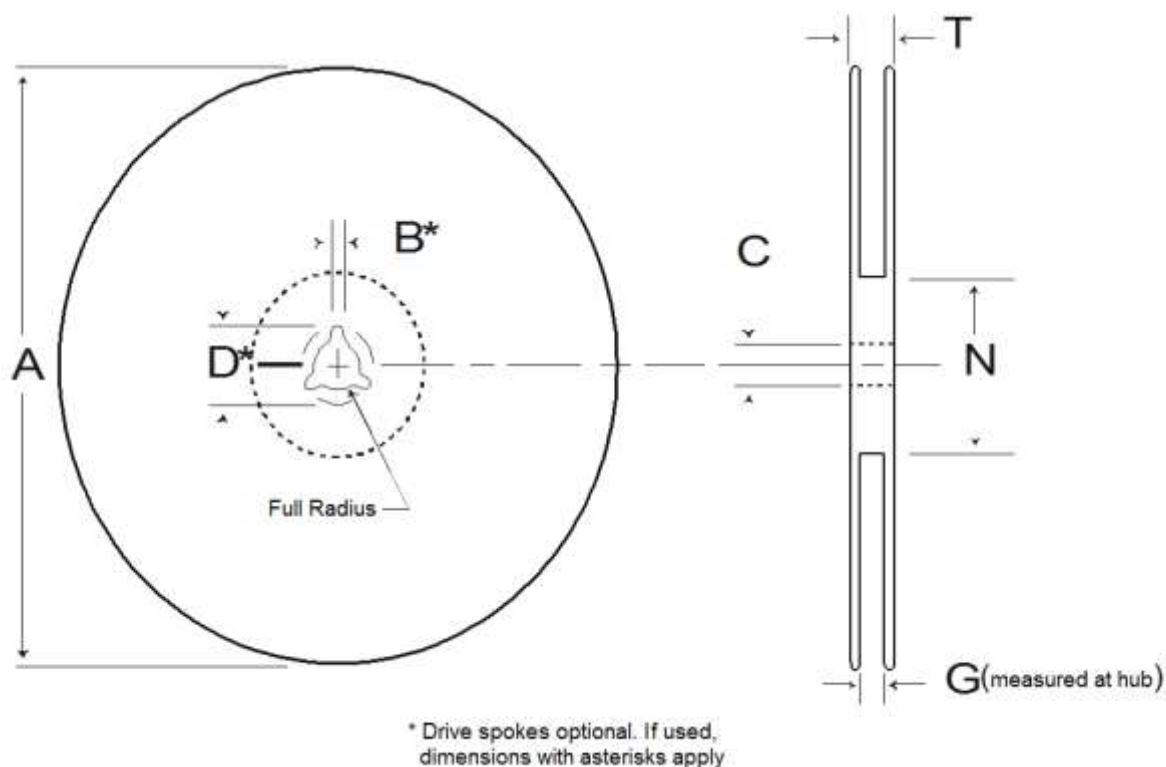
Maximum Component Rotation Top View



Maximum Component Rotation Side View

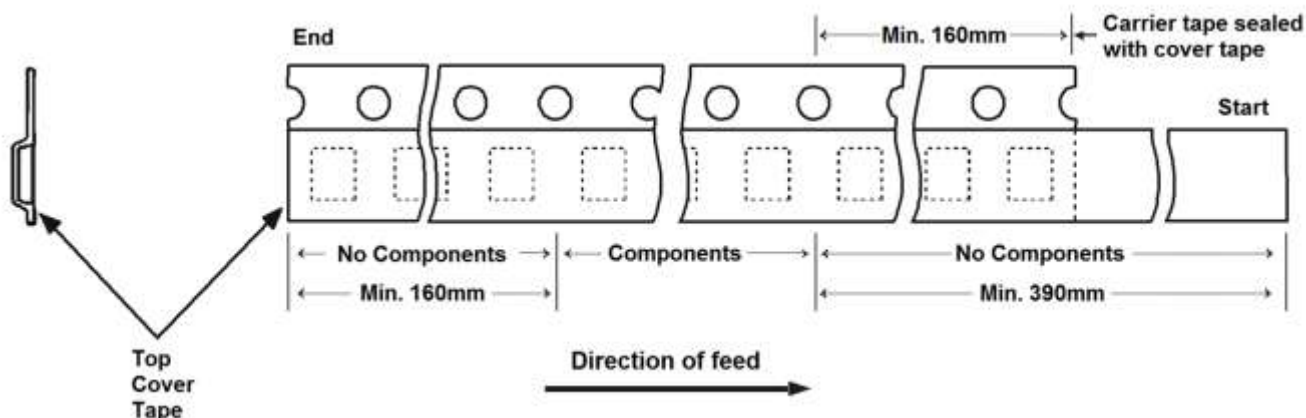


Surface Mount Reel Specifications



| Tape Width | Reel Size | A (mm) | B Max (mm) | C (mm) | D Max (mm) | N Min (mm) | G (mm) | T Max (mm) |
|------------|-----------|-----------|---------------|--------------|---------------|---------------|----------------|---------------|
| 12mm | 7" | 178 ±2 | 2.0 +0.5 -0 | 13 +0.5 -0.2 | 20.5 ±0.2 | 55 ±5 | 12.4 +2.0 -0.0 | 18.4 |
| | 13" | 330 ±2 | 2.0 +0.5 -0 | 13 +0.5 -0.2 | 20.5 ±0.2 | 100 ±2 | 12.4 +2.0 -0.0 | 18.4 |

Tape Leader and Trailer Specifications



Note: There shall be a leader of at least 230mm which may consist of carrier tape and/or cover tape or a start tape followed by at least 160mm of empty carrier tape sealed with cover tape.

Note: There shall be a trailer of at least 160mm of empty carrier tape sealed with cover tape. The entire carrier tape must release from the reel hub as the last portion of the tape unwinds from the reel without damage to the carrier tape and the remaining components in the cavities.