1.0 Introduction
MACOM supplies integrated circuits, diodes, and related surface mount components in tape wound on standard 7-inch and 13-inch diameter reels. This application note documents the reel and tape dimensions and the orientation of the components within the tape cavities for many of our most popular package styles.

Packages Covered in This Application Note:

<table>
<thead>
<tr>
<th>Package Type</th>
<th>Package Type</th>
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<tbody>
<tr>
<td>1 mm X1DFN-6LD</td>
<td>LSM6</td>
</tr>
<tr>
<td>1.2 x 1.5 mm TDFN-6LD (0.5 mm pitch)</td>
<td>MSOP-8, MSOP-8EP</td>
</tr>
<tr>
<td>1.5 x 1.2 mm TDFN-6LD (0.4 mm pitch)</td>
<td>MSOP-10</td>
</tr>
<tr>
<td>2 mm PDFN-8LD</td>
<td>ODS-120 (ceramic)</td>
</tr>
<tr>
<td>2 mm STDFN-8LD</td>
<td>ODS-186 (ceramic)</td>
</tr>
<tr>
<td>2 mm STQFN-12LD</td>
<td>ODS-1056 (ceramic)</td>
</tr>
<tr>
<td>2 x 2.5 mm STQFN-14LD</td>
<td>ODS-1072 (MELF)</td>
</tr>
<tr>
<td>3 mm PQFN-12LD</td>
<td>ODS-1079 (MELF)</td>
</tr>
<tr>
<td>3 mm PQFN-12LD (1.1 mm Height)</td>
<td>ODS-1091 (MELF)</td>
</tr>
<tr>
<td>3 mm PQFN-16LD</td>
<td>ODS-1269 (GaAs flip-chip)</td>
</tr>
<tr>
<td>3 x 6 mmPDFN-14LD</td>
<td>ODS-1294 (surmount)</td>
</tr>
<tr>
<td>4 mm PQFN-16LD</td>
<td>ODS-1295 (surmount)</td>
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<td>4 mm PQFN-20LD</td>
<td>ODS-1305 (GaAs flip-chip)</td>
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<td>4 mm PQFN-24LD</td>
<td>ODS-1306 (surmount)</td>
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<td>ODS-1402 (GaAs flip-chip)</td>
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<td>4 x 7 mm PQFN-36LD</td>
<td>ODS-1411 (GaAs flip-chip)</td>
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<td>ODS-1500 (GaAs flip-chip)</td>
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<td>5 x 6 mm PQFN-32LD</td>
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<td>5 x 7 mm PQFN-40LD</td>
<td>R-1, R-4, R-5, R-15</td>
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<td>SC70-3LD</td>
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<td>6 x 7 mm PQFN-37LD</td>
<td>SC70-6LD</td>
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<td>7 mm LGA-16</td>
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<tr>
<td>8 mm BGA</td>
<td>SM-1</td>
</tr>
<tr>
<td>15 mm BGA</td>
<td>SM-2</td>
</tr>
<tr>
<td>BD-1, BD-2, BD-3 (Bumped Die)</td>
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<tr>
<td>CR-5</td>
<td>SM-4 (same as SM-2)</td>
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<tr>
<td>LCC1</td>
<td>SM-7-1</td>
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<td>LSM2</td>
<td>SM-22</td>
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<tr>
<td>LSM3</td>
<td>SM-23 (same as SM-1)</td>
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Tape and Reel Packaging for Surface Mount Components

Packages Covered in This Application Note (cont.):

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<td>SM-24</td>
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<td>SM-26</td>
<td>TSSOP-16, TSSOP-16EP</td>
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<td>SM-41</td>
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<td>SM-52</td>
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<td>SM-74 (same as SM-2)</td>
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<td>SM-87 (same as SM-1)</td>
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<td>SM-89 (same as SM-1)</td>
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<td>SM-106</td>
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<td>SM-108 (same as SM-2)</td>
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<td>SM-134 (same as SM-1)</td>
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<td>SOIC-8</td>
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<td>SOIC-14</td>
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<td>SOIC-16</td>
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</tr>
<tr>
<td>SOIC-16 Wide Body</td>
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<tr>
<td>SOIC-24 Wide Body</td>
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<tr>
<td>SOT-23</td>
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</tr>
<tr>
<td>SOT-25 (same as SOT-23 (5LD))</td>
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<td>SOT-26 (same as SOT-23 (6LD))</td>
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<tr>
<td>SOT-143</td>
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<tr>
<td>SOW-16 (same as SOIC-16 Wide Body)</td>
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<tr>
<td>SOW-24 (same as SOIC-24 Wide Body)</td>
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<td>SSOP-8</td>
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<td>SSOP-20</td>
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<tr>
<td>SSOP-24</td>
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</table>
# 2.0 Reel Dimensions

![Reel Diagram](image)

Reel Dimensions in mm

<table>
<thead>
<tr>
<th>W Tape Width²</th>
<th>W₁ (+2.0/-0.0)</th>
<th>W₂ (max.)</th>
<th>N (min.)</th>
<th>B (min.)</th>
<th>C (+0.5/-0.2)</th>
<th>D (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A = 7 inch</td>
<td>A = 13 inch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8.4</td>
<td>14.4</td>
<td>50</td>
<td>1.5</td>
<td>13</td>
<td>20.2</td>
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<tr>
<td>12</td>
<td>12.4</td>
<td>18.4</td>
<td>50</td>
<td>1.5</td>
<td>13</td>
<td>20.2</td>
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<tr>
<td>16</td>
<td>16.4</td>
<td>22.4</td>
<td>50</td>
<td>1.5</td>
<td>13</td>
<td>20.2</td>
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<tr>
<td>24</td>
<td>24.4</td>
<td>30.4</td>
<td>N/A</td>
<td>1.5</td>
<td>13</td>
<td>20.2</td>
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<tr>
<td>32</td>
<td>32.4</td>
<td>38.4</td>
<td>N/A</td>
<td>1.5</td>
<td>13</td>
<td>20.2</td>
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</tbody>
</table>

1. See section 5.0 Reel Diameter Dimensions.
2. See section 3.0 Tape Dimensions.
3.0 Tape Dimensions

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perforation</strong></td>
<td>Diameter</td>
<td>( D_0 )</td>
<td>( 1.5 +0.1 / -0.0 )</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>( P_0 )</td>
<td>( 4 \pm 0.1 )</td>
</tr>
<tr>
<td></td>
<td>Position</td>
<td>( E_1 )</td>
<td>( 1.75 \pm 0.1 )</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Thickness</td>
<td>( T )</td>
<td>( 0.25 \pm 0.1 )</td>
</tr>
<tr>
<td></td>
<td>Thickness</td>
<td>( T_1 )</td>
<td>( 0.06 \pm 0.02 )</td>
</tr>
</tbody>
</table>

Notes:
1. 10 sprocket hole cumulative tolerance \( \pm 0.2 \)
2. Dimensions in millimeters (mm).
3. Not to exact scale.
4. Camber not to exceed 1 mm in 100 mm.
5. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.
6. Metric dimensions will govern.
### 1 mm X1DFN-6LD

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>1.2 ± 0.0/-0.05</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>1.2 ± 0.0/-0.05</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.55 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
</tr>
</tbody>
</table>

### 1.2 x 1.5 mm TDFN-6LD (0.5 mm Lead Pitch) & 1.5 x 1.2 mm TDFN-6LD (0.4 mm Lead Pitch)

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>1.75 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>1.35 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.02 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
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</table>

### 2 mm PDFN-8LD

<table>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>2.42 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2.42 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Diameter</td>
<td>D₁</td>
<td>1 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
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</table>
## Tape and Reel Packaging for Surface Mount Components

### 2 mm STDFN-8LD, 2 mm STQFN-12LD

<table>
<thead>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<td>Cavity</td>
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<td>2.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.75 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Diameter</td>
<td>D₁</td>
<td>1 ± 0.25</td>
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<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
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<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.5 ± 0.1</td>
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<tr>
<td>Carrier Tape</td>
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### 2 x 2.5 mm STQFN-14LD

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<td>Length</td>
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<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.7 ± 0.05</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Diameter</td>
<td>D₁</td>
<td>0.7 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
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### 3 mm PQFN-12LD, 3 mm PQFN-16LD

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<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>3.3 ± 0.1</td>
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<tr>
<td></td>
<td>Width</td>
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<td>Depth</td>
<td>K₀</td>
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</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
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## Tape and Reel Packaging for Surface Mount Components

### 3 mm PQFN-12LD (1.1 mm Height)

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<th>Symbol</th>
<th>Size (mm)</th>
</tr>
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<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>3.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>3.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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<td>W</td>
<td>12 ± 0.3</td>
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### 3 x 6 mm PDFN-14LD

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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>3.25 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>6.35 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
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<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>

### 4 mm PQFN-16LD, 4 mm PQFN-20LD, 4 mm PQFN-24LD

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>4.35 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>4.35 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
</tr>
</tbody>
</table>
## Tape and Reel Packaging for Surface Mount Components

### 4 x 6 mm PQFN-32LD

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>4.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>6.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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### 4 x 7 mm PQFN-36LD

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</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>4.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>7.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
</tr>
</tbody>
</table>

### 5 mm PQFN-20LD, 5 mm PQFN-28LD, 5 mm PQFN-32LD

<table>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>5.25 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>5.25 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
</tr>
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### 5 x 6 mm PQFN-32LD

<table>
<thead>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>5.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>6.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
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# Tape and Reel Packaging for Surface Mount Components

## 5 x 7 mm PQFN-40LD

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<th>Size (mm)</th>
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<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>$A_0$</td>
<td>$5.5 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>$B_0$</td>
<td>$7.5 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>$K_0$</td>
<td>$1.5 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>$P_1$</td>
<td>$8 \pm 0.1$</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>$P_2$</td>
<td>$2 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>$F$</td>
<td>$7.5 \pm 0.1$</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>$C$</td>
<td>$13.3 \pm 0.1$</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>$W$</td>
<td>$16 \pm 0.3$</td>
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## 6 x 5 mm PDFN-8LD

<table>
<thead>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>$A_0$</td>
<td>$6.5 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>$B_0$</td>
<td>$5.5 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>$K_0$</td>
<td>$1.4 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>$P_1$</td>
<td>$8 \pm 0.1$</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>$P_2$</td>
<td>$2 \pm 0.05$</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>$F$</td>
<td>$5.5 \pm 0.05$</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>$C$</td>
<td>$9.3 \pm 0.1$</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>$W$</td>
<td>$12 \pm 0.3$</td>
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</table>

## 6 x 7 mm PQFN-37LD

<table>
<thead>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>$A_0$</td>
<td>$6.4 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>$B_0$</td>
<td>$7.4 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>$K_0$</td>
<td>$1.2 \pm 0.1$</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>$P_1$</td>
<td>$12 \pm 0.1$</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>$W$</td>
<td>$16 \pm 0.3$</td>
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</table>
## Tape and Reel Packaging for Surface Mount Components

### 7 mm LGA-16LD

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<th>Symbol</th>
<th>Size (mm)</th>
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<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>7.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>7.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.9 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>

### 8 mm BGA

<table>
<thead>
<tr>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>8.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>8.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.7 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
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</tbody>
</table>

### 15 mm BGA

<table>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>15.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>15.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>3.8 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>20 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>11.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>21 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>24 ± 0.3</td>
</tr>
</tbody>
</table>
# Tape and Reel Packaging for Surface Mount Components

## BD-1

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>0.82 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>0.82 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.395 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pocket Hole Diameter</td>
<td>D₁</td>
<td>0.35 ± 0.05</td>
</tr>
<tr>
<td><strong>Distance Between</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td><strong>Centerlines</strong></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
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<td>8 ± 0.1</td>
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## BD-2

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<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>1.1 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>1.25 ± 0.05</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.298 ± 0.028</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pocket Hole Diameter</td>
<td>D₁</td>
<td>0.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Distance Between</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td><strong>Centerlines</strong></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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<td>8 ± 0.1</td>
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## BD-3

<table>
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</tr>
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<td><strong>Cavity</strong></td>
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<td>0.58 ± 0.05</td>
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<td>Width</td>
<td>B₀</td>
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<td></td>
<td>Depth</td>
<td>K₀</td>
<td>0.36 ± 0.05</td>
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<tr>
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<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
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<tr>
<td></td>
<td>Pocket Hole Diameter</td>
<td>D₁</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Distance Between</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td><strong>Centerlines</strong></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.3 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
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</table>
## Tape and Reel Packaging for Surface Mount Components

### CR-5

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<th>Symbol</th>
<th>Size (mm)</th>
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<td>Width</td>
<td>B₀</td>
<td>9.91 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.03 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>11.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>21 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>24 ± 0.3</td>
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### LCC1

<table>
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<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
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<td>Depth</td>
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<td>3.38</td>
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<td>Pitch</td>
<td>P₁</td>
<td>16</td>
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<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
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</tr>
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### LSM1

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<td>Width</td>
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<td></td>
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<td>K₀</td>
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<td></td>
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<td>P₁</td>
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<td>F</td>
<td>11.5</td>
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<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
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</table>

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# Tape and Reel Packaging for Surface Mount Components

## LSM2

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<td>Width</td>
<td>( B_0 )</td>
<td>15</td>
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<tr>
<td></td>
<td>Depth</td>
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<td>4.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>( P_1 )</td>
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</tr>
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<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>( P_2 )</td>
<td>2 ± 0.1</td>
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<td>Cavity to Perforation (width)</td>
<td>( F )</td>
<td>11.5</td>
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Tape and Reel Packaging for Surface Mount Components

MSOP-8, MSOP-8EP, MSOP-10

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<td>Length</td>
<td>A₀</td>
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<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>3.4 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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ODS-120

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<td>Width</td>
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<td>Pitch</td>
<td>P₁</td>
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</tr>
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<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
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<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3/0.1</td>
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ODS-186

<table>
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<td>A₀</td>
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<td>Width</td>
<td>B₀</td>
<td>2.7 ± 0.1</td>
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<td>Depth</td>
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<td>Pitch</td>
<td>P₁</td>
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<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
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<td>Cavity to Perforation (width)</td>
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<td>7.5 ± 0.1</td>
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<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
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Tape and Reel Packaging for Surface Mount Components

**ODS-1056**

<table>
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<td>Length</td>
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<td>2 ± 0.1</td>
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<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.19 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ±0.3/-0.1</td>
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**ODS-1072**

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<td>Depth</td>
<td>K₀</td>
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<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
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<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.3 ± 0.1</td>
</tr>
<tr>
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**ODS-1079**

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<td>Width</td>
<td>B₀</td>
<td>3.2 ± 0.1</td>
</tr>
<tr>
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<td>Depth</td>
<td>K₀</td>
<td>3.12 ± 0.1</td>
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<tr>
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<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
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<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.3 ± 0.1</td>
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<tr>
<td>Carrier Tape</td>
<td>Width</td>
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# Tape and Reel Packaging for Surface Mount Components

**ODS-1091**

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<tr>
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<td>Length</td>
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<td>Distance Between</td>
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<td></td>
<td>Centerlines</td>
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<td>Cavity to Perforation (length)</td>
<td>(P_2)</td>
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<td>Cavity to Perforation (width)</td>
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**ODS-1294,1295,1306**

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<td>Depth</td>
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<td>Pitch</td>
<td>(P_1)</td>
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<td></td>
<td>Distance Between</td>
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<tr>
<td></td>
<td>Centerlines</td>
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**ODS-1305,1269**

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<td>Width</td>
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<td>Depth</td>
<td>(K_0)</td>
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<td>Pitch</td>
<td>(P_1)</td>
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<td></td>
<td>Distance Between</td>
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<td></td>
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<tr>
<td></td>
<td>Centerlines</td>
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<tr>
<td></td>
<td>Cavity to Perforation (length)</td>
<td>(P_2)</td>
<td>2 ± 0.05</td>
</tr>
<tr>
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<td>Width</td>
<td>(C)</td>
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<td>Carrier Tape</td>
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### Tape and Reel Packaging for Surface Mount Components

**ODS-1402, 1411, 1500**

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<td>B₀</td>
<td>0.84 ± 0.03</td>
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<td>Depth</td>
<td>K₀</td>
<td>0.31 ± 0.03</td>
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<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
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<tr>
<td><strong>Distance Between</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td><strong>Centerlines</strong></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
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<td>8 ± 0.3/−0.1</td>
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**QSOP-16, QSOP-16EP**

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<td>Width</td>
<td>B₀</td>
<td>5.4 ± 0.1</td>
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<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.6 ± 0.1</td>
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<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
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<td><strong>Distance Between</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
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<tr>
<td><strong>Centerlines</strong></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
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**QSOP-24**

<table>
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<td>A₀</td>
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</tr>
<tr>
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<td>B₀</td>
<td>9 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.1 ± 0.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
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<td>C</td>
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<td><strong>Carrier Tape</strong></td>
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### Tape Dimensions

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<td></td>
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<td>Width</td>
<td>B₀</td>
<td>10.3 ± 0.1</td>
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<td>Depth</td>
<td>K₀</td>
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<tr>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
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<td></td>
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<tr>
<td>Cavity to Perforation (length)</td>
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<tr>
<td>Cavity to Perforation (width)</td>
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<tr>
<td><strong>Cover Tape</strong></td>
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<td></td>
</tr>
<tr>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
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<tr>
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### R-1, R-4, R-5, R-15

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<td>A₀</td>
<td>12.5 ± 0.1</td>
</tr>
<tr>
<td>Width</td>
<td>B₀</td>
<td>12.9 ± 0.1</td>
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<tr>
<td>Depth</td>
<td>K₀</td>
<td>6.1 ± 0.1</td>
</tr>
<tr>
<td>Pitch</td>
<td>P₁</td>
<td>16 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
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### SC70-3LD, SC70-6LD

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<td>Depth</td>
<td>K₀</td>
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<tr>
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</tr>
<tr>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
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### SC-79

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<td>B₀</td>
<td>1.94 ± 0.05</td>
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<td>K₀</td>
<td>0.73 ± 0.05</td>
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<td>Pitch</td>
<td>P₁</td>
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<td>Cavity to Perforation (width)</td>
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<td>3.5 ± 0.05</td>
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<td><strong>Cover Tape</strong></td>
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<tr>
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<td>Width</td>
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### SM-1, SM-23, SM-69, SM-87, SM-89, SM-134

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<td>Width</td>
<td>B₀</td>
<td>8.5 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>5.3 ± 0.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
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<tr>
<td><strong>Carrier Tape</strong></td>
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### SM-2, SM-4, SM-74, SM-108

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<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>13.46 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>6.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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### SM-3

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<td>Length</td>
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</tr>
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<td></td>
<td>Width</td>
<td>B₀</td>
<td>20.5 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>5.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>24 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
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<td>W</td>
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### SM-7-1

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<td><strong>Cavity</strong></td>
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</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>21.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>5.6 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>24 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
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### SM-20

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<td>Width</td>
<td>B₀</td>
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</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>7.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>24 ± 0.3</td>
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### SM-22

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<td></td>
<td>Width</td>
<td>B₀</td>
<td>5 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.8 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
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</table>
## Tape and Reel Packaging for Surface Mount Components

### SM-24

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<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
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<td></td>
<td>Depth</td>
<td>K₀</td>
<td>5.5 ± 0.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>16 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
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<td>W</td>
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### SM-26

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<td>Width</td>
<td>B₀</td>
<td>19.8 ± 0.1</td>
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<td>Depth</td>
<td>K₀</td>
<td>5.5 ± 0.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>16 ± 0.1</td>
</tr>
<tr>
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<td>Width</td>
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### SM-28

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<tr>
<td></td>
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</tr>
<tr>
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### SM-41

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</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>7.4 ± 0.1</td>
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<td>Pitch</td>
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<tr>
<td>Carrier Tape</td>
<td>Width</td>
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## Tape and Reel Packaging for Surface Mount Components

### SM-44, SM-68

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<tr>
<td></td>
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<td></td>
<td>Depth</td>
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</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>( P_1 )</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>( W )</td>
<td>16 ± 0.3</td>
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### SM-46

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<td>Width</td>
<td>( B_0 )</td>
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<tr>
<td></td>
<td>Depth</td>
<td>( K_0 )</td>
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<td></td>
<td>Pitch</td>
<td>( P_1 )</td>
<td>24 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
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<td>( W )</td>
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### SM-52

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<td></td>
<td>Width</td>
<td>( B_0 )</td>
<td>5.6 ± 0.1</td>
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<tr>
<td></td>
<td>Depth</td>
<td>( K_0 )</td>
<td>3 ± 0.1</td>
</tr>
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<td></td>
<td>Pitch</td>
<td>( P_1 )</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
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<td>( W )</td>
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### SM-55

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<td>Width</td>
<td>( B_0 )</td>
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<tr>
<td></td>
<td>Depth</td>
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<td></td>
<td>Pitch</td>
<td>( P_1 )</td>
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<tr>
<td>Carrier Tape</td>
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</table>
Tape and Reel Packaging for Surface Mount Components

### SM-106

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<td>B₀</td>
<td>20.8 ± 0.1</td>
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<td></td>
<td>Depth</td>
<td>K₀</td>
<td>6 ± 0.1</td>
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<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>24 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>32 ± 0.3</td>
</tr>
</tbody>
</table>

### SOD-323

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>1.46 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2.9 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.25 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.05</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.05</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ±0.3/-0.1</td>
</tr>
</tbody>
</table>

### SOIC-8 (SO-8)

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>6.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>5.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td>Distance Between Centerlines</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.2 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.3</td>
</tr>
</tbody>
</table>
# Tape and Reel Packaging for Surface Mount Components

## SOIC-14 (SO-14), SSOP-24

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>6.5 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>9 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>

## SOIC-16 (SO-16), SSOP-28

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>6.5 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>10.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>

## SOT-23

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>3.125 ± 0.125</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2.835 ± 0.165</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.23 ± 0.11</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
</tr>
</tbody>
</table>
## Tape and Reel Packaging for Surface Mount Components

### SOT-25, SOT-26

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>3.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>3.2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
</tr>
</tbody>
</table>

### SOT-89

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>4.6 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>4.78 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.9 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>5.5 ± 0.5</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>9.3 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>12 ± 0.2</td>
</tr>
</tbody>
</table>

### SOT-143

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavity</td>
<td>Length</td>
<td>A₀</td>
<td>3.1 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>2.69 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>1.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>4 ± 0.1</td>
</tr>
<tr>
<td>Distance Between</td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td>Centerlines</td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>3.5 ± 0.1</td>
</tr>
<tr>
<td>Cover Tape</td>
<td>Width</td>
<td>C</td>
<td>5.4 ± 0.1</td>
</tr>
<tr>
<td>Carrier Tape</td>
<td>Width</td>
<td>W</td>
<td>8 ± 0.3</td>
</tr>
</tbody>
</table>
# Tape and Reel Packaging for Surface Mount Components

## SOW-16 (SOIC-16 Wide Body)

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>10.9 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>10.7 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>

## SOW-24 (SOIC-24 Wide Body)

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>10.7 ± 0.2</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>15.8 ± 0.2</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>12 ± 0.1</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>11.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>20</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>24 ± 0.3</td>
</tr>
</tbody>
</table>

## SSOP-8

<table>
<thead>
<tr>
<th>Tape Dimensions</th>
<th>Description</th>
<th>Symbol</th>
<th>Size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cavity</strong></td>
<td>Length</td>
<td>A₀</td>
<td>3.4 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Width</td>
<td>B₀</td>
<td>8.3 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>K₀</td>
<td>2.54 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Pitch</td>
<td>P₁</td>
<td>8</td>
</tr>
<tr>
<td><strong>Distance Between Centerlines</strong></td>
<td>Cavity to Perforation (length)</td>
<td>P₂</td>
<td>2 ± 0.1</td>
</tr>
<tr>
<td></td>
<td>Cavity to Perforation (width)</td>
<td>F</td>
<td>7.5 ± 0.1</td>
</tr>
<tr>
<td><strong>Cover Tape</strong></td>
<td>Width</td>
<td>C</td>
<td>13.3 ± 0.1</td>
</tr>
<tr>
<td><strong>Carrier Tape</strong></td>
<td>Width</td>
<td>W</td>
<td>16 ± 0.3</td>
</tr>
</tbody>
</table>
Tape Dimensions | Description | Symbol | Size (mm) |
---|---|---|---|
Cavity | Length | A₀ | 8.2 ± 0.1 |
 | Width | B₀ | 7.5 ± 0.1 |
 | Depth | K₀ | 2.5 ± 0.1 |
 | Pitch | P₁ | 12 ± 0.1 |
Distance Between Centerlines | Cavity to Perforation (length) | P₂ | 2 ± 0.1 |
 | Cavity to Perforation (width) | F | 7.5 ± 0.1 |
Cover Tape | Width | C | 13.3 ± 0.1 |
Carrier Tape | Width | W | 16 ± 0.3 |

**TSSOP-16, TSSOP-16EP**

| Tape Dimensions | Description | Symbol | Size (mm) |
---|---|---|---|
Cavity | Length | A₀ | 6.95 ± 0.1 |
 | Width | B₀ | 5.6 ± 0.1 |
 | Depth | K₀ | 1.6 ± 0.1 |
 | Pitch | P₁ | 8 ± 0.1 |
Distance Between Centerlines | Cavity to Perforation (length) | P₂ | 2 ± 0.1 |
 | Cavity to Perforation (width) | F | 7.5 ± 0.1 |
Cover Tape | Width | C | 13.3 ± 0.1 |
Carrier Tape | Width | W | 16 ± 0.3 |
4.0 Component Orientation for Tape and Reel

1 mm X1DFN-6LD

2 x 2.5 mm STQFN-14LD

1.2 x 1.5 mm TDFN-6LD (0.5 mm Lead Pitch)

3 mm PQFN-12LD, 3 mm PQFN-16LD

1.5 x 1.2 mm TDFN-6LD (0.4 mm Lead Pitch)

3 mm PQFN-12LD (1.1 mm Height)

2 mm PDFN-8LD, 2 mm STDFN-8LD, 2 mm STQFN-12LD

3 x 6 mm PDFN-14LD
Tape and Reel Packaging for Surface Mount Components

4 mm PQFN-16LD,
4 mm PQFN-20LD,
4 mm PQFN-24LD

5 x 6 mm PQFN-32LD

5 x 6 mm PQFN-32LD

4 x 6 mm PQFN-32LD

5 x 7 mm PQFN-40LD

5 x 7 mm PQFN-40LD

4 x 7 mm PQFN-36LD

6 x 5 mm PDFN-8LD

6 x 5 mm PDFN-8LD

5 mm PQFN-20LD,
5 mm PQFN-28LD,
5 mm PQFN-32LD

6 x 7 mm PQFN-37LD

6 x 7 mm PQFN-37LD

For further information and support please visit: https://www.macom.com/support
Tape and Reel Packaging for Surface Mount Components

7 mm LGA-16LD

BD-2, Bumped Die, 0.925 x 1.095 mm (bumps facing down)

8 mm BGA

BD-3, Bumped Die, 0.485 x 0.605 mm (bumps facing down)

15 mm BGA

CR-5

BD-1, Bumped Die, 0.705 mm Sq. (bumps facing down)

LCC1

For further information and support please visit:
https://www.macom.com/support
Tape and Reel Packaging for Surface Mount Components

**ODS-1294, 1295 & 1306**

**QSOP-16, QSOP-16EP, TSSOP-16**

**SC70-3LD, SC70-6LD**

**QSOP-24, SOIC-14**

**SC-79, SOD-323**

**QSOP-28, SOIC-16**

**SM-1, SM-23, SM-41, SM-69, SM-87, SM-89, SM-134**
Tape and Reel Packaging for Surface Mount Components

SM-2, SM-4, SM-44, SM-68, SM-74, SM-108

User Direction of Feed

SM-22

User Direction of Feed

SM-3, SM-26

User Direction of Feed

SM-24

User Direction of Feed

SM-7-1, SM-28, SM-55

User Direction of Feed

SM-46

User Direction of Feed

SM-20

User Direction of Feed

SM-52

User Direction of Feed
Tape and Reel Packaging for Surface Mount Components

SM-106

SOIC-8

SOT-89

SOT-143

SOT-23

SOW-16 (SOIC-16 Wide Body)

SOW-24 (SOIC-24 Wide Body)

SM-106

SOIC-8

SOT-89

SOT-143

SOT-23

SOW-16 (SOIC-16 Wide Body)

SOW-24 (SOIC-24 Wide Body)
## 5.0 Reel Information

<table>
<thead>
<tr>
<th>Package Type</th>
<th>Max. Devices per Reel</th>
<th>Reel Diameter (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mm X1DFN-6LD, 2 mm STDFN-8LD, 2 mm STQFN-12LD, 2 x 2.5 mm STQFN-14LD</td>
<td>3000</td>
<td>7</td>
</tr>
<tr>
<td>1.2 x 1.5 mm TDFN-6LD (0.5 mm pitch), 1.5 x 2 mm TDFN-6LD (0.4 mm pitch)</td>
<td>3000</td>
<td>7</td>
</tr>
<tr>
<td>2 mm PDFN-8LD</td>
<td>3000</td>
<td>7</td>
</tr>
<tr>
<td>3 mm PQFN-12LD, 3 mm PQFN-12LD (1.1 mm height), 3 mm PQFN-16LD, 3 x 6 mm PDFN-14LD, 4 mm PQFN-16LD, 4 mm PQFN-20LD, 4 mm PQFN-24LD</td>
<td>1000, 3000</td>
<td>7, 13</td>
</tr>
<tr>
<td>4 x 6 mm PQFN-32LD, 4 x 7 mm PQFN-36LD</td>
<td>1000</td>
<td>7</td>
</tr>
<tr>
<td>5 mm PQFN-20LD, 5 mm PQFN-28LD, 5 mm PQFN-32LD</td>
<td>1000</td>
<td>7</td>
</tr>
<tr>
<td>5 x 6 mm PQFN-36LD, 5 x 7 mm PQFN-40LD</td>
<td>1000, 3000</td>
<td>7, 13</td>
</tr>
<tr>
<td>6 x 5 mm PDFN-8LD, 6 x 7 mm PQFN-37LD</td>
<td>1000, 3000</td>
<td>7, 13</td>
</tr>
<tr>
<td>7 mm LGA-16LD</td>
<td>500</td>
<td>7</td>
</tr>
<tr>
<td>8 mm BGA, 15 mm BGA</td>
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</tr>
<tr>
<td>BD-1, BD-2, BD-3</td>
<td>3000</td>
<td>7</td>
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<tr>
<td>CR-5</td>
<td>2500</td>
<td>13</td>
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<td>LCC1, LSM1, LSM2, LSM3</td>
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<td>MSOP8, MSOP-8EP, MSOP-10</td>
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<td>ODS-1072</td>
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<td>ODS-1079</td>
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<tr>
<td>ODS-1269, 1294, 1295, 1305, 1306, 1402, 1411, 1500</td>
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### 5.0 Reel Information (continued)\(^3\)\(^4\)

<table>
<thead>
<tr>
<th>Package Type</th>
<th>Max. Devices per Reel</th>
<th>Reel Diameter (inches)</th>
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<tr>
<td>QSOP-16, QSOP-16EP, QSOP-24, QSOP-28</td>
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<td>R-1, R-4, R-5, R-15</td>
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<td>SC70-3LD, SC70-6LD, SC-79, SOT-23, SOT-25, SOT-26, SOT-89, SOT-143, SOD-323</td>
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<td>SM-1, SM-55, SM-69</td>
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<td>SM-2, SM-4, SM-7-1, SM-20, SM-23, SM-24, SM-41, SM-44</td>
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<td>SSOP-20, SSOP-24, SSOP-28</td>
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<td>TSSOP-16, TSSOP-16EP</td>
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<td>2500</td>
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</table>

\(^3\) See individual data sheets for part number ordering information.

\(^4\) Most device in tape and reel must be ordered in multiples of 100 pieces, with a minimum order quantity of either 200 or 500 pieces per part number. Consult factory for individual package types.
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