Date:   June 29, 2015

Subject:  EIA-481-E Taping of Surface Mount Components for Automated Handling – Update for Rev E

This notification is to address IDT’s compliancy with EIA-481-E.  We have reviewed this industry standard and are in full compliance with the exception of some of the square QFP and QFN packages. Table 1 lists the packages and current orientation of Pin 1, which is in Quadrant 1, while the EIA-481-E requires orientation of Pin 1 in Quadrant 2.

Refer to Figure 1 and Figure 2 in Attachment 1 for an illustration of the Tape and Reel loading for Pin 1 orientation.

Table 1: Pin 1 Orientation in Tape & Reel – IDT standard based on EIA-481-C

<table>
<thead>
<tr>
<th>Package Type</th>
<th>IDT Package Type</th>
<th>EIA-481-E</th>
<th>IDT Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>QFP</td>
<td>TQFP (Square)</td>
<td>Quadrant 2</td>
<td>Quadrant 1</td>
</tr>
<tr>
<td></td>
<td>PTQFP (Square)</td>
<td>Quadrant 2</td>
<td>Quadrant 1</td>
</tr>
<tr>
<td></td>
<td>PQFP (Square)</td>
<td>Quadrant 2</td>
<td>Quadrant 1</td>
</tr>
<tr>
<td>QFN</td>
<td>VFQFPN (Square)</td>
<td>Quadrant 2</td>
<td>Quadrant 1</td>
</tr>
<tr>
<td></td>
<td>COL (Square)</td>
<td>Quadrant 2</td>
<td>Quadrant 1</td>
</tr>
</tbody>
</table>

As provided in an earlier Manufacturing Bulletin regarding EIA-481-D, IDT will continue to provide for EIA-481-C compliance.

Changing Pin 1 orientation for these packages in order to comply with Rev D or E would be disruptive to the majority of our customers who have received shipments with this orientation in the past.

IDT will offer a special orderable part# with “/W” or “#” (if part number is space constrained) suffix added to the existing part#.  This will provide for shipments in Tape & Reel with pin 1 orientated in Quadrant 2 for the packages listed in Table 1.  This special part # will be available upon request.

Please contact your IDT sales representative if you have any additional questions concerns.

Yours sincerely,

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Manufacturing Bulletin – Attachment 1

Tape & Reel Loading Orientation per IDT Standard ---> Pin 1 in Quadrant 1

![Figure 1]

Tape & Reel Loading Orientation per EIA-481 rev E ---> Pin 1 in Quadrant 2

![Figure 2]