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1. GEN III 8X8mm Performance PQFN TAPE & REEL INFORMATION

Part I: Product Orientation

- Leader Empty Pockets: 400mm / 15.75” min
- Trailer Empty Pockets: 160mm / 6.30” min
- Quantity per Reel: 500pcs

Part II: Carrier Tape Dimension

Notes:
- 10 Sprocket Hole pitch cumulative tolerance ±0.2
- Camber in compliance with EIA 481
- Pocket position relative to Sprocket Hole measured as true position of Pocket not Pocket Hole

Ao = 8.40
Bo = 8.40
Ko = 2.40
Part III: Reel Dimension

- Reel Size: 178mm

<table>
<thead>
<tr>
<th>TAPE WIDTH</th>
<th>W1 (NOMINAL)</th>
<th>W2 (MAXIMUM)</th>
<th>W3 (MAXIMUM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8mm (0.315)</td>
<td>8.4 (0.331)</td>
<td>14.4 (0.567)</td>
<td>10.9 (0.429)</td>
</tr>
<tr>
<td>12mm (0.472)</td>
<td>12.4 (0.488)</td>
<td>18.4 (0.724)</td>
<td>15.4 (0.606)</td>
</tr>
<tr>
<td>16mm (0.629)</td>
<td>16.4 (0.646)</td>
<td>22.4 (0.882)</td>
<td>19.4 (0.764)</td>
</tr>
<tr>
<td>24mm (0.945)</td>
<td>24.4 (0.961)</td>
<td>30.4 (1.197)</td>
<td>27.4 (1.079)</td>
</tr>
<tr>
<td>32mm (1.260)</td>
<td>32.4 (1.276)</td>
<td>38.4 (1.512)</td>
<td>35.4 (1.394)</td>
</tr>
<tr>
<td>44mm (1.732)</td>
<td>44.4 (1.748)</td>
<td>50.4 (1.984)</td>
<td>47.4 (1.866)</td>
</tr>
</tbody>
</table>

Dimensions are in millimeters (inches are in brackets for reference only).
Part IV: Box Size

Dimensions are in millimeters (inches are in brackets for reference only).
Part V: Package POD for LDG Version

![Diagram of package POD]

<table>
<thead>
<tr>
<th>DIM</th>
<th>mm</th>
<th>inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.73</td>
<td>0.068</td>
</tr>
<tr>
<td>b</td>
<td>2.90</td>
<td>0.114</td>
</tr>
<tr>
<td>c</td>
<td>0.10</td>
<td>0.004</td>
</tr>
<tr>
<td>D</td>
<td>7.50</td>
<td>0.311</td>
</tr>
<tr>
<td>D1</td>
<td>7.11</td>
<td>0.280</td>
</tr>
<tr>
<td>D2</td>
<td>4.10</td>
<td>0.162</td>
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<tr>
<td>D3</td>
<td>0.45</td>
<td>0.018</td>
</tr>
<tr>
<td>L</td>
<td>0.76</td>
<td>0.030</td>
</tr>
</tbody>
</table>

G: Gate  
S: Source  
D: Drain  
Lead finish: Sn plating

PQFN 8mm x 8mm POD (TPHxxxxLDG)
Part VI: Package POD for LSG Version & Laser Marking Sample

Laser Marking Sample

transphorm

TPH3206LDG

XXXXX-X

YYWW

TOP MARKING (LASER)
Part VII: Tape and Reel Packing Information

Tape and Reel Shielding Bag

- 500 units/reel
- Maximum 1 reel/box
- Place Tape and Reel inside moisture barrier bag
- Seal moisture bag
Part VIII: Internal Shipping Box Information

Internal Shipping Box

- Tape internal box closed using ESD Label.
- Place Internal Shipping Label.

Internal Shipping Box Label

- **CPN**: Customer Part Number
- **MPN**: Transphorm Part Number
- **Lot #**: Assembly Lot Number
- **QTY**: Quantity contained inside the box
- **D/C**: Date Code
- **Job #**: Tape and Reel job number
- **Date T&R**: Bag seal date
Part IX: External Shipping Box Information

External Shipping Box

- Internal Shipping Boxes inside External Shipping Box.
- Number of Internal Boxes ranges from 3 to 5.
- Place External Shipping Label.

External Shipping Box Label

- **From:** Transphorm shipping address
- **To:** Customer name, address attention to, and phone number
- **Customer PO:** Customer Purchase Order Number
- **Customer P/N:** Customer Part Number
- **Quantity:** Total product quantity contain in external shipping box
- **Transphorm P/N:** Transphorm Product Number
- **Country of Origin:** Country of Origin where product was manufactured
- **Package Count:** Number of External Shipping Boxes contained in shipment
- **Package Weight:** Weight of packed External Shipping Box
## Shipping Box Size and Weight

<table>
<thead>
<tr>
<th>Shipment</th>
<th>Units</th>
<th>Weight</th>
<th>Size</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 box</td>
<td>500pcs</td>
<td>0.8 (lbs)</td>
<td></td>
<td>FedEx Shipping box</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.363 (kgs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 boxes</td>
<td>1500pcs</td>
<td>2.4 (lbs)</td>
<td>12 in x 12 in x 12 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.09 (kgs)</td>
<td>304.8mm x 304.8mm x 304.8mm</td>
<td></td>
</tr>
<tr>
<td>4 boxes</td>
<td>2000pcs</td>
<td>3.2 (lbs)</td>
<td>12 in x 12 in x 12 in</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>1.45 (kgs)</td>
<td>304.8mm x 304.8mm x 304.8mm</td>
<td></td>
</tr>
<tr>
<td>5 boxes</td>
<td>2500pcs</td>
<td>4.0 (lbs)</td>
<td>12 in x 12 in x 12 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.81 (kgs)</td>
<td>304.8mm x 304.8mm x 304.8mm</td>
<td></td>
</tr>
</tbody>
</table>
2. GEN IV 8x8mm PQFN TAPE & REEL INFORMATION

Part I: Performance PQFN Product Orientation

- Leader Empty Pockets: 77
- Trailer Empty Pockets: 37
- Quantity per Reel: 3,000pcs

Part II: Industry Standard PQFN Product Orientation

- Leader Empty Pockets: 77
- Trailer Empty Pockets: 37
- Quantity per Reel: 3,000pcs
Part III: Carrier Tape Dimension

Ao = 8.40
Bo = 8.40
Ko = 1.20

Notes:
- 10 Sprocket Hole pitch cumulative tolerance ±0.2
- Camber in compliance with EIA 481
- Pocket position relative to Sprocket Hole measured as true position of Pocket not Pocket Hole
Part IV: Reel Dimension

- Reel Size: 330mm
Part V: Box Size

Dimensions are in millimeter (inches are in brackets for reference only)
Part VI: Package POD for LSG Version & Laser Marking Sample

Laser Marking Sample

transphorm
TP65H150G4LSG
XXXXXXX-X
YYWW

PQFN 8mm x 8mm POD (TP65HxxxG4LSG)
Part VII: Package POD for *Industry Standard* LSGB Version

**TOP VIEW**

**BOTTOM VIEW**

**FRONT VIEW**

<table>
<thead>
<tr>
<th>DIM</th>
<th>MIN</th>
<th>NOM</th>
<th>MAX</th>
<th>MIN</th>
<th>NOM</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.90</td>
<td>1.00</td>
<td>1.10</td>
<td>0.035</td>
<td>0.005</td>
<td>0.013</td>
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<td>A1</td>
<td>0.40</td>
<td>0.45</td>
<td>0.50</td>
<td></td>
<td>0.000</td>
<td>0.002</td>
</tr>
<tr>
<td>A3</td>
<td>0.20</td>
<td></td>
<td></td>
<td>0.007</td>
<td>0.005</td>
<td>0.018</td>
</tr>
<tr>
<td>D</td>
<td>7.90</td>
<td>8.00</td>
<td>8.10</td>
<td>0.311</td>
<td>0.315</td>
<td>0.319</td>
</tr>
<tr>
<td>D2</td>
<td>6.18</td>
<td>6.18</td>
<td>6.18</td>
<td>0.007</td>
<td>0.007</td>
<td>0.007</td>
</tr>
<tr>
<td>e</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
<td>0.007</td>
<td>0.007</td>
<td>0.007</td>
</tr>
<tr>
<td>e2</td>
<td>3.15</td>
<td>3.20</td>
<td>3.25</td>
<td>0.005</td>
<td>0.020</td>
<td>0.072</td>
</tr>
<tr>
<td>k1</td>
<td>0.60</td>
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<td>0.030</td>
<td></td>
<td>0.050</td>
</tr>
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<td>k2</td>
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<tr>
<td>L</td>
<td>0.40</td>
<td>0.60</td>
<td>0.60</td>
<td>0.018</td>
<td>0.020</td>
<td>0.024</td>
</tr>
</tbody>
</table>

PQFN 8mm x 8mm POD (TP65HxxxG4LSGB)
Part VIII: Tape and Reel Packaging Information

Tape and Reel Shielding Bag
- 3,000 units/reel
- Maximum 1 reel/box
- Place Tape and Reel inside moisture barrier bag
- Seal moisture bag

Part IX: Internal Shipping Box Information

Internal Shipping Box
- Tape internal box closed using ESD Label
- Place Internal Shipping Label

Internal Shipping Box Label
- **Supplier P/N:** Transphorm Part Number
- **Quantity:** Quantity contained inside the box
- **Date Code:** YYWW
- **Lot Code:** Assembly Lot Number
- **COO:** Country of Origin
- **2D Barcode:** Above information encoded
Part X: External Shipping Box Information

External Shipping Box
- Internal Shipping Boxes inside External Shipping Box
- Number of Internal Boxes ranges from 2 to 6
- Place External Shipping Label

External Shipping Box Label

- **From**: Transphorm shipping address
- **To**: Customer name, Attention TO, and address number
- **PO Number**: Customer Purchase Order Number
- **Supplier Part Number**: Transphorm Part Number
- **Quantity**: Total product quantity contain in external shipping box
- **Package ID**: Transphorm Assigned Number
- **Date Code**: YYWW
- **Lot Code**: Assembly Lot Number
- **COO**: Country of Origin

**2D Barcode**: Above information encoded
## Shipping Box Size and Weight

<table>
<thead>
<tr>
<th>Shipment</th>
<th>Units</th>
<th>Weight</th>
<th>Size</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 box</td>
<td>3,000pcs</td>
<td>3.13 (lbs)</td>
<td>15.25 in x 13.5 in x 15.5 in</td>
<td>FedEx Shipping box</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.42 (kgs)</td>
<td>387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>3 boxes</td>
<td>9,000pcs</td>
<td>9.39 (lbs)</td>
<td>15.25 in x 13.5 in x 15.5 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.26 (kgs)</td>
<td>387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>4 boxes</td>
<td>12,000pcs</td>
<td>12.52 (lbs)</td>
<td>15.25 in x 13.5 in x 15.5 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.68 (kgs)</td>
<td>387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>5 boxes</td>
<td>15,000pcs</td>
<td>15.65 (lbs)</td>
<td>15.25 in x 13.5 in x 15.5 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.10 (kgs)</td>
<td>387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>6-boxes</td>
<td>18,000pcs</td>
<td>18.78 (lbs)</td>
<td>15.25 in x 13.5 in x 15.5 in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.52 (kgs)</td>
<td>387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
</tbody>
</table>
3. GEN IV 5X6mm PQFN TAPE & REEL INFORMATION

Part I: **Performance** PQFN Product Orientation

- Leader Empty Pockets: 85
- Trailer Empty Pockets: 40
- Quantity per Reel: 4,000pcs

Part II: **Industry Standard** PQFN Product Orientation

- Leader Empty Pockets: 85
- Trailer Empty Pockets: 40
- Quantity per Reel: 4,000pcs
Part III: Carrier Tape Dimension

Ao = 5.30
Bo = 6.30
Ko = 1.20

Notes:

- 10 Sprocket Hole pitch cumulative tolerance ±0.2
- Camber in compliance with EIA 481

1. Pocket position relative to Sprocket Hole measured as true position of Pocket not Pocket Hole
Part IV: Reel Dimension

- Reel Size: 330mm
Part V: Box Size

Dimensions are in millimeter (inches are in brackets for reference only)
Application Note 0012

Part VI: Package POD for Performance JSG Version & Laser Marking Sample

Laser Marking Sample

PQFN 5mm x 6mm POD (TP65HxxxG4JSG)
Part VII: Package POD for *Industry Standard* JSGB version

**Note:** P/N TP65H150BG4JSG is following this exact POD

<table>
<thead>
<tr>
<th>DIN</th>
<th>MIN</th>
<th>NOM</th>
<th>MAX</th>
<th>MIN</th>
<th>NOM</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>0.02</td>
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<td>0.06</td>
<td>0.000</td>
<td>0.000</td>
<td>0.002</td>
</tr>
<tr>
<td>A2</td>
<td>0.05 [0.002]</td>
<td>0.06 [0.02]</td>
<td>0.08 [0.03]</td>
<td>0.007 BSC</td>
<td>0.007 BSC</td>
<td>0.002</td>
</tr>
<tr>
<td>b</td>
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<td>0.55</td>
<td>0.016</td>
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<td>0.022</td>
</tr>
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<td>5.10</td>
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<td>4.15</td>
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<td>0.80</td>
<td>0.024</td>
<td>0.028</td>
<td>0.031</td>
</tr>
</tbody>
</table>

PQFN 5mm x 6mm POD (TP65HxxxG4JSB)
Part VIII: Tape and Reel Packing Information

Tape and Reel Shielding Bag
- 4,000 units/reel
- Maximum 1 reel/box
- Place Tape and Reel inside moisture barrier bag
- Seal moisture bag

Part IX: Internal Shipping Box Information

Internal Shipping Box
- Tape internal box closed using ESD Label.
- Place Internal Shipping Label.

Internal Shipping Box Label

Supplier P/N: Transphorm Part Number
Quantity: Quantity contained inside the box
Date Code: YYWW
Lot Code: Assembly Lot Number
COO: Country of Origin

2D Barcode: Above information encoded
Part X: External Shipping Box Information

External Shipping Box

- Internal Shipping Boxes inside External Shipping Box
- Number of Internal Boxes ranges from 2 to 6
- Place External Shipping Label

External Shipping Box Label

From: Transphorm shipping address
To: Customer name, Attention TO, and address number
PO Number: Customer Purchase Order Number
Supplier Part Number: Transphorm Part Number
Quantity: Total product quantity contain in external shipping box
Package ID: Transphorm Assigned Number
Date Code: YYWW
Lot Code: Assembly Lot Number
COO: Country of Origin

2D Barcode: Above information encoded
## Shipping Box Size and Weight

<table>
<thead>
<tr>
<th>Shipment</th>
<th>Units</th>
<th>Weight</th>
<th>Size</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 box</td>
<td>4,000pcs</td>
<td>2.47 lbs</td>
<td>FedEx Shipping box</td>
<td></td>
</tr>
<tr>
<td>3 boxes</td>
<td>12,000pcs</td>
<td>7.41 lbs</td>
<td>15.25 in x 13.5 in x 15.5 in x 387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>4 boxes</td>
<td>16,000pcs</td>
<td>9.88 lbs</td>
<td>15.25 in x 13.5 in x 15.5 in x 387.35 mm x 342.9mm x 393.7mm</td>
<td></td>
</tr>
<tr>
<td>5 boxes</td>
<td>20,000pcs</td>
<td>12.35 lbs</td>
<td>15.25 in x 13.5 in x 15.5 in x 387.35 mm x 342.9mm x 393.7mm</td>
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</tr>
<tr>
<td>6-boxes</td>
<td>24,000pcs</td>
<td>14.82 lbs</td>
<td>15.25 in x 13.5 in x 15.5 in x 387.35 mm x 342.9mm x 393.7mm</td>
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