



# **Recommended Footprints for QFP Series User Guide**

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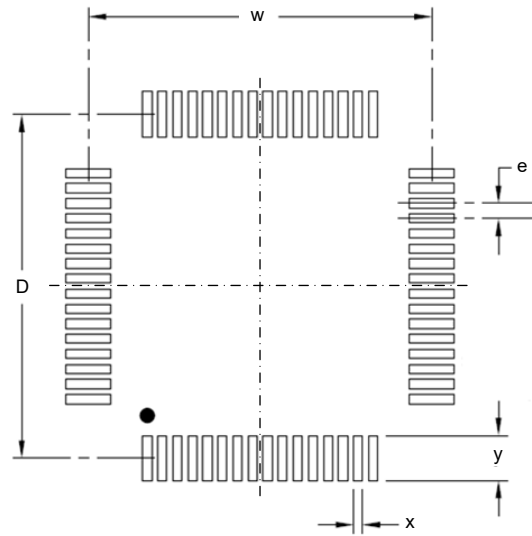
[\*\*www.holtek.com\*\*](http://www.holtek.com)

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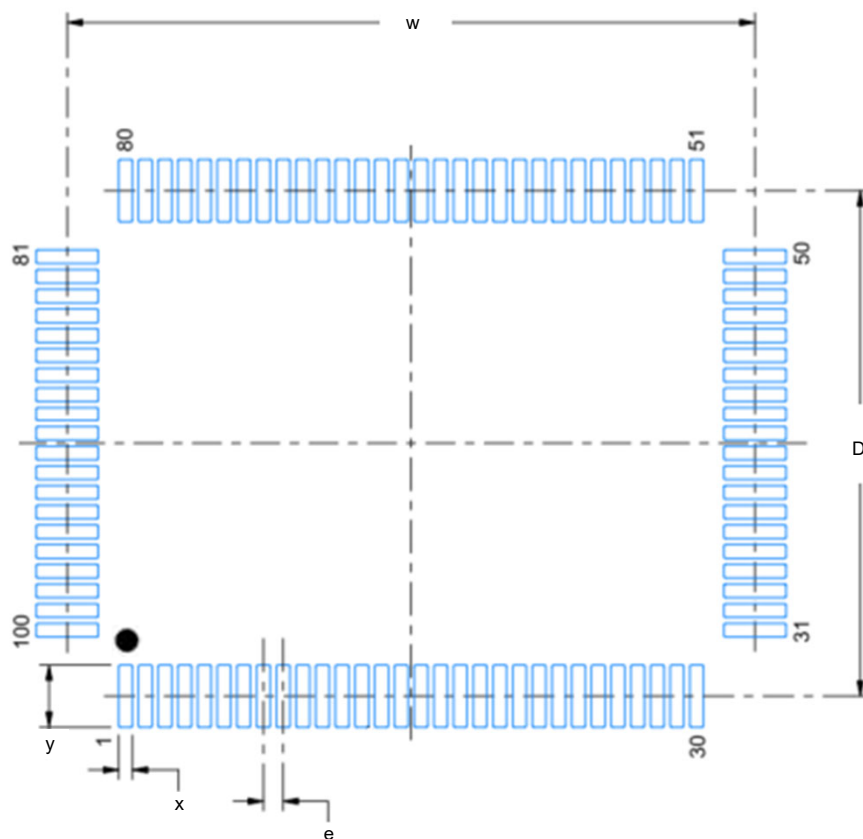
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Note that the footprint information provided here is for consultation purpose only. For the most current package drawings, please see the Holtek packaging information located at <http://www.holtek.com.tw>

## Footprints for QFP

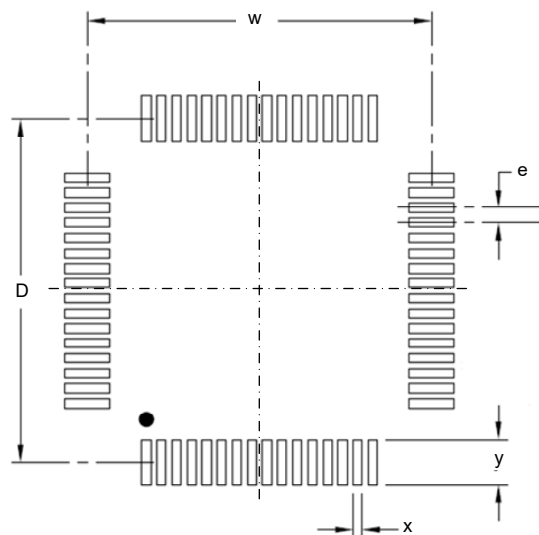


| Unit: mm    | D        | W        | e        | x   |     |      | y   |      |     |
|-------------|----------|----------|----------|-----|-----|------|-----|------|-----|
|             |          |          |          | Min | Typ | Max  | Min | Typ  | Max |
| 44 (10×10)  | 12.3 BSC | 12.3 BSC | 0.80 BSC | —   | —   | 0.50 | —   | 2.25 | —   |
| 52 (10×10)  | 12.3 BSC | 12.3 BSC | 0.65 BSC | —   | —   | 0.45 | —   | 2.25 | —   |
| 52 (14×14)  | 16.3 BSC | 16.3 BSC | 1.00 BSC | —   | —   | 0.55 | —   | 2.25 | —   |
| 64 (14×14)  | 16.3 BSC | 16.3 BSC | 0.80 BSC | —   | —   | 0.50 | —   | 2.25 | —   |
| 208 (28×28) | 30.0 BSC | 30.0 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 1.65 | —   |



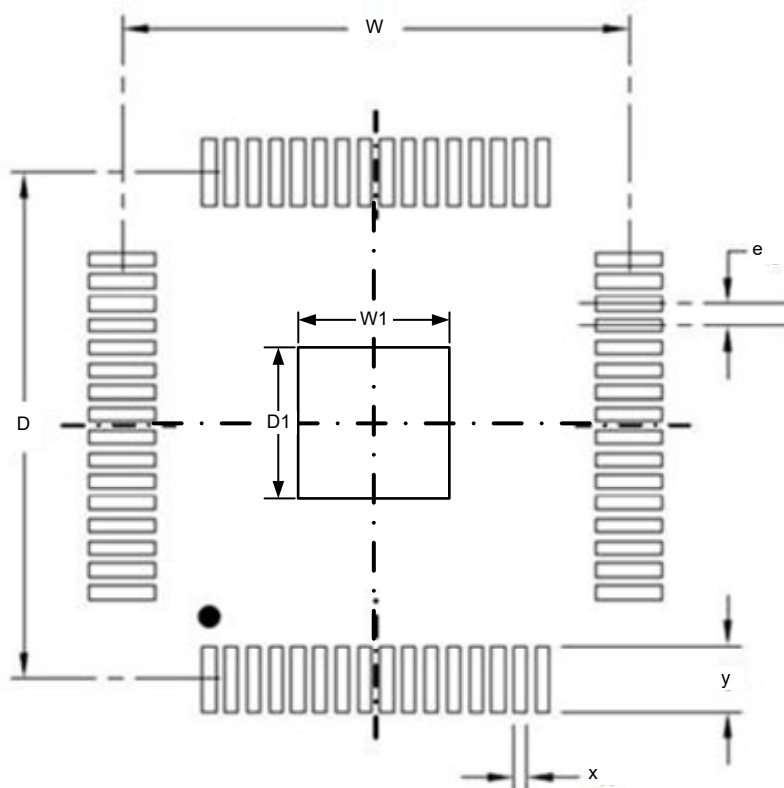
| Unit: mm    | D        | W        | e        | x   |     |      | y   |      |     |
|-------------|----------|----------|----------|-----|-----|------|-----|------|-----|
|             |          |          |          | Min | Typ | Max  | Min | Typ  | Max |
| 64 (14×20)  | 17.7 BSC | 23.7 BSC | 1.00 BSC | —   | —   | 0.55 | —   | 3.05 | —   |
| 80 (14×20)  | 17.0 BSC | 23.0 BSC | 0.80 BSC | —   | —   | 0.50 | —   | 2.25 | —   |
| 100 (14×20) | 17.6 BSC | 23.6 BSC | 0.65 BSC | —   | —   | 0.45 | —   | 2.85 | —   |
| 128 (14×20) | 16.4 BSC | 22.4 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 2.05 | —   |

## Footprints for LQFP/TQFP



| Unit: mm           | D        | W        | e        | x   |     |      | y   |      |     |
|--------------------|----------|----------|----------|-----|-----|------|-----|------|-----|
|                    |          |          |          | Min | Typ | Max  | Min | Typ  | Max |
| 32 (7×7)           | 8.4 BSC  | 8.4 BSC  | 0.80 BSC | —   | —   | 0.50 | —   | 1.65 | —   |
| 48 (7×7)           | 8.4 BSC  | 8.4 BSC  | 0.05 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 64 (7×7)           | 8.4 BSC  | 8.4 BSC  | 0.40 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 44 (10×10 FP2.0mm) | 11.4 BSC | 11.4 BSC | 0.80 BSC | —   | —   | 0.50 | —   | 1.65 | —   |
| 44 (10×10 FP3.2mm) | 12.0 BSC | 12.0 BSC | 0.80 BSC | —   | —   | 0.40 | —   | 2.85 | —   |
| 64 (10×10)         | 11.4 BSC | 11.4 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 80 (10×10)         | 11.4 BSC | 11.4 BSC | 0.40 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 80 (12×12)         | 13.4 BSC | 13.4 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 52 (14×14)         | 15.4 BSC | 15.4 BSC | 1.00 BSC | —   | —   | 0.50 | —   | 1.65 | —   |
| 80 (14×14)         | 15.4 BSC | 15.4 BSC | 0.65 BSC | —   | —   | 0.40 | —   | 1.65 | —   |
| 100 (14×14)        | 15.4 BSC | 15.4 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 128 (14×14)        | 15.4 BSC | 15.4 BSC | 0.40 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 144 (20×20)        | 21.4 BSC | 21.4 BSC | 0.50 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 216 (24×24)        | 25.4 BSC | 25.4 BSC | 0.40 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 256 (28×28)        | 29.4 BSC | 29.4 BSC | 0.40 BSC | —   | —   | 0.25 | —   | 1.65 | —   |

## Footprints for LQFP/TQFP(Exposed Pad)



| Unit: mm    | D        | W        | e       | x   |     |      | y   |      |     |
|-------------|----------|----------|---------|-----|-----|------|-----|------|-----|
|             |          |          |         | Min | Typ | Max  | Min | Typ  | Max |
| LQFP        |          |          |         |     |     |      |     |      |     |
| 48 (7×7)    | 8.4 BSC  | 8.4 BSC  | 0.5 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 128 (14×14) | 15.4 BSC | 15.4 BSC | 0.4 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 256 (28×28) | 29.4 BSC | 29.4 BSC | 0.4 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| TQFP        |          |          |         |     |     |      |     |      |     |
| 48 (7×7)    | 8.4 BSC  | 8.4 BSC  | 0.5 BSC | —   | —   | 0.30 | —   | 1.65 | —   |
| 64 (7×7)    | 8.4 BSC  | 8.4 BSC  | 0.4 BSC | —   | —   | 0.25 | —   | 1.65 | —   |
| 100 (14×14) | 15.4 BSC | 15.4 BSC | 0.5 BSC | —   | —   | 0.30 | —   | 1.65 | —   |

| Unit: mm    | D1  |     |     | W1  |     |     |
|-------------|-----|-----|-----|-----|-----|-----|
|             | Min | Typ | Max | Min | Typ | Max |
| <b>LQFP</b> |     |     |     |     |     |     |
| 48 (7×7)    | 4.3 | —   | —   | 4.3 | —   | —   |
| 128 (14×14) | 5.8 | —   | —   | 5.8 | —   | —   |
| 256 (28×28) | 8.8 | —   | —   | 8.8 | —   | —   |
| <b>TQFP</b> |     |     |     |     |     |     |
| 48 (7×7)    | 2.0 | —   | —   | 2.0 | —   | —   |
| 64 (7×7)    | 2.0 | —   | —   | 2.0 | —   | —   |
| 100 (14×14) | 2.0 | —   | —   | 2.0 | —   | —   |

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