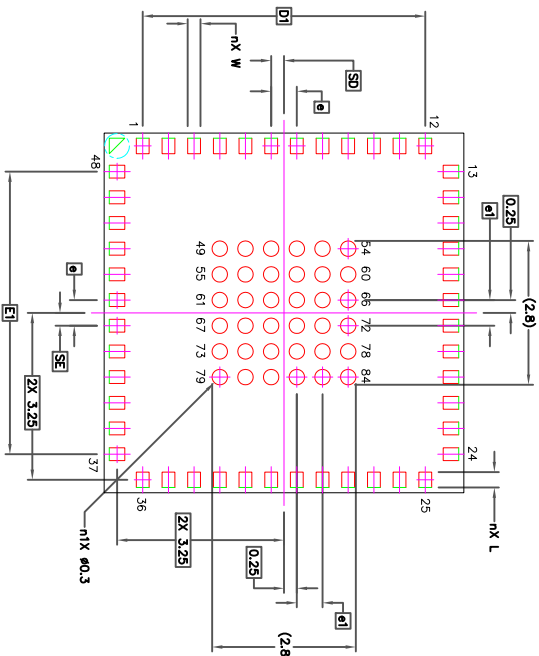
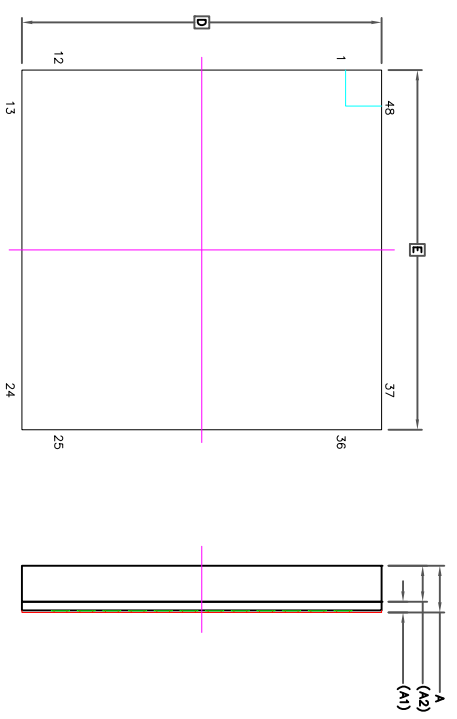


| REVISIONS |                 |  | DATE    | APPROVED |
|-----------|-----------------|--|---------|----------|
| REV       | DESCRIPTION     |  |         |          |
| 00        | INITIAL RELEASE |  | 5/28/14 | JH       |

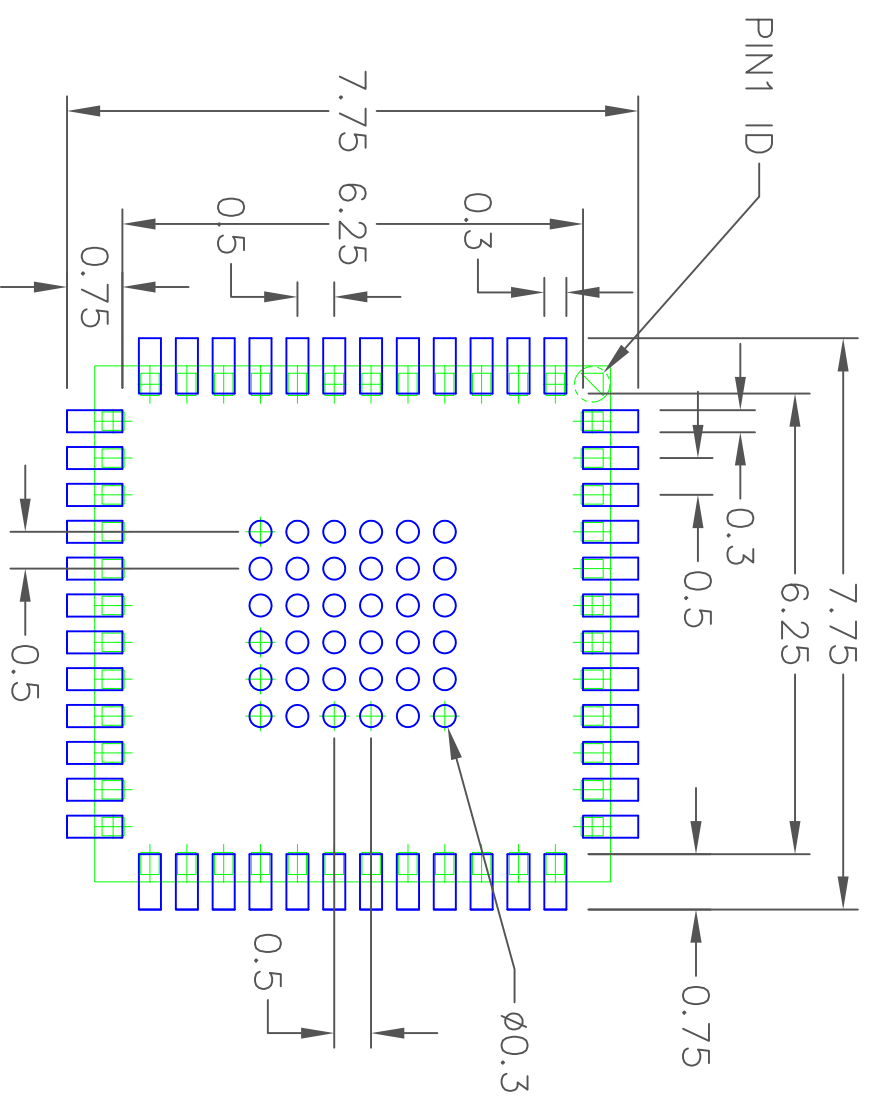


|                                       | SYMBOL | COMMON DIMENSIONS |      |      |
|---------------------------------------|--------|-------------------|------|------|
|                                       |        | MIN.              | NOR. | MAX. |
| TOTAL THICKNESS                       | A      | ---               | ---  | 1    |
| SUBSTRATE THICKNESS                   | A1     |                   | 0.21 | REF  |
| MOLD THICKNESS                        | A2     |                   | 0.7  | REF  |
| BODY SIZE                             | D      |                   | 7    | BSC  |
|                                       | E      |                   | 7    | BSC  |
|                                       | W      |                   | 0.2  | 0.25 |
| LEAD WIDTH                            | L      |                   | 0.25 | 0.3  |
| LEAD LENGTH                           | L      |                   | 0.25 | 0.3  |
| LEAD PITCH                            | e      |                   | 0.5  | BSC  |
| LEAD COUNT                            | n      |                   | 48   |      |
| EDGE SM (*3) OPENING CENTER TO CENTER | D1     |                   | 5.5  | BSC  |
|                                       | E1     |                   | 5.5  | BSC  |
| BODY CENTER TO CONTACT SM OPENING     | SD     |                   | 0.25 | BSC  |
|                                       | SE     |                   | 0.25 | BSC  |
| SM OPENING                            |        |                   | 0.3  |      |
| SM OPENING PITCH                      | e1     |                   | 0.5  | BSC  |
| SM OPENING COUNT                      | n1     |                   | 36   |      |
| PRE-SOLDER                            |        | ---               | ---  |      |
| PACKAGE EDGE TOLERANCE                | ooo    |                   | 0.1  |      |
| MOLD FLATNESS                         | bbb    |                   | 0.2  | ---  |
| COPPLANARITY                          | ddd    |                   | 0.08 |      |

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
  2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M 1994.
  3. SM STANDS FOR SOLDER MASK.

|                             |         |                                 |                       |
|-----------------------------|---------|---------------------------------|-----------------------|
| TOLERANCES UNLESS SPECIFIED |         | 6024 Silver Creek Valley Road   |                       |
| DECIMAL                     | ANGULAR | San Jose, CA 95138              |                       |
| ±                           |         | PHONE: (408) 284-8200           |                       |
| XXXX±                       |         | WWW.IDT.COM FAX: (408) 284-8591 |                       |
| XXXX±                       |         |                                 |                       |
| APPROVALS                   | DATE    | TITLE                           | LG648 PACKAGE OUTLINE |
| DRAWN BY                    | 5/28/14 | SIZE                            | 7.0 x 7.0 mm BODY     |
| CHECKED                     |         | DRAWING No.                     | 0.5 mm PITCH QFN      |
|                             |         | SIZE                            | C                     |
|                             |         | DRAWING No.                     | PSC-4482              |
|                             |         | DO NOT SCALE DRAWING            |                       |
|                             |         | SHEET                           | 1 OF 2                |
|                             |         | REV                             | 00                    |

| REVISIONS |                 |         |          |
|-----------|-----------------|---------|----------|
| REV       | DESCRIPTION     | DATE    | APPROVED |
| 00        | INITIAL RELEASE | 5/28/14 | JH       |



- NOTES:
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
  2. TOP DOWN VIEW. AS VIEWED ON PCB.
  3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
  4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
  5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

|                             |         |                       |             |
|-----------------------------|---------|-----------------------|-------------|
| TOLERANCES UNLESS SPECIFIED |         | TITLE                 |             |
| DECIMAL                     | ANGULAR | LGG48 PACKAGE OUTLINE |             |
| ±                           | ±       | 7.0 x 7.0 mm BODY     |             |
| XXXX±                       |         | 0.5 mm PITCH QFN      |             |
| APPROVALS                   | DATE    | SIZE                  | DRAWING No. |
| DRAWN <i>JH</i>             | 5/28/14 | C                     | PSC-4482    |
| CHECKED                     |         |                       | REV         |
|                             |         |                       | 00          |

**IDT** 6024 Silver Creek Valley Road  
 San Jose, CA 95138  
 PHONE: (408) 294-8200  
 WWW.IDT.COM FAX: (408) 284-8891