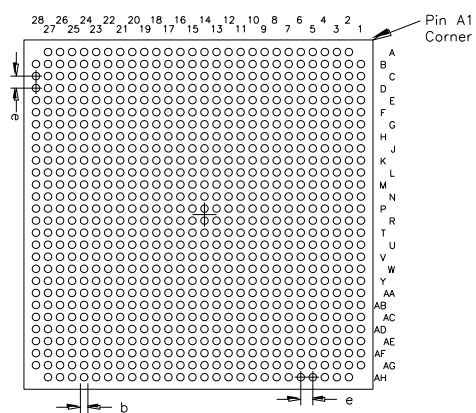
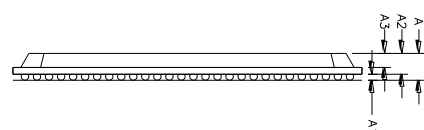
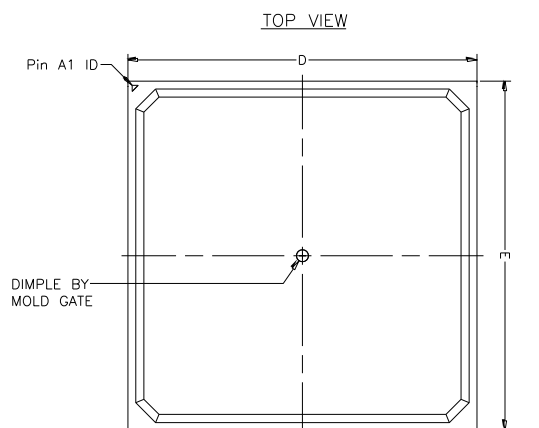
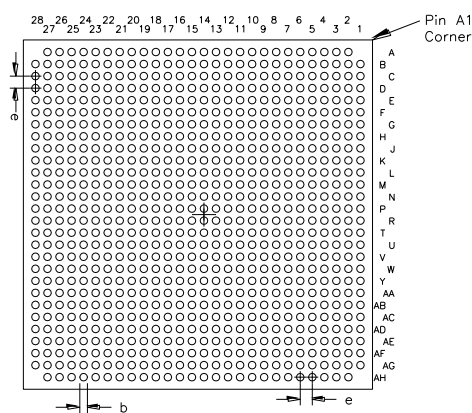
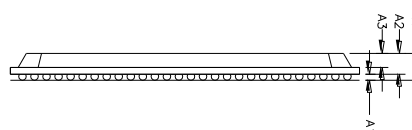
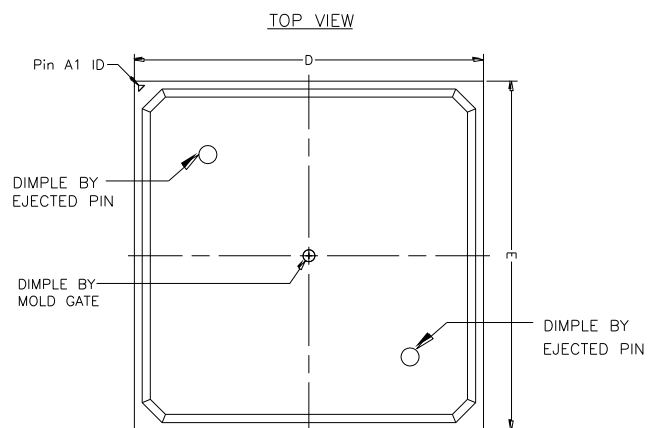


780-Pin FineLine Ball-Grid Array (FBGA) - Wire Bond - A:2.40

- All dimensions and tolerances conform to ASME Y14.5M – 1994.
- Controlling dimension is in millimeters.
- Pin A1 may be indicated by an ID dot, or a special feature, in its proximity on package surface.

| Package Information | |
|----------------------------|---|
| Description | Specification |
| Ordering Code Reference | F |
| Package Acronym | FBGA |
| Substrate Material | BT |
| Solder ball composition | Regular: 63Sn:37Pb (Typ.) Pb-free: Sn:3Ag:0.5Cu (Typ.) |
| JEDEC Outline Reference | MS-034 Variation: AAM-1 |
| Lead Coplanarity | 0.008 inch (0.20 mm) |
| Weight | 3.0 g (Typ.) |
| Moisture Sensitivity Level | Printed on moisture barrier bag |

| Package Outline Dimension Table | | | |
|---------------------------------|-------------|------|------|
| Symbol | Millimeters | | |
| | Min. | Nom. | Max. |
| A | 2.10 | 2.25 | 2.40 |
| A1 | 0.40 | 0.50 | 0.60 |
| A2 | 1.50 | 1.75 | 2.00 |
| A3 | 1.12 | 1.17 | 1.22 |
| D | 29.00 BSC | | |
| E | 29.00 BSC | | |
| b | 0.50 | 0.60 | 0.70 |
| e | 1.00 BSC | | |

Package Outline**OPTION 1****OPTION 2**

Document Revision History

Table 1 shows the revision history for this document.

Table 1. Document Revision History

| Date | Version | Changes |
|----------------|---------|---|
| September 2011 | 1.0 | Initial release |
| December 2012 | 2.0 | Add option 2 package outline in page.2. |



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