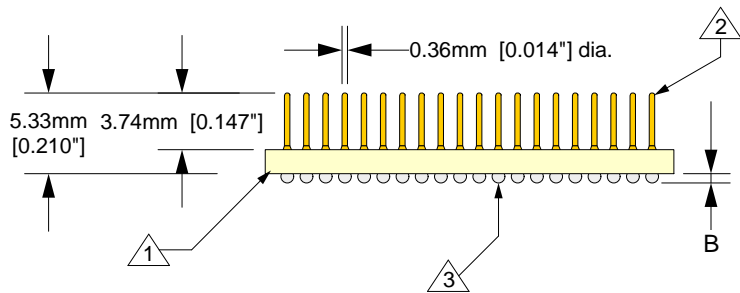


Top View  
(reference only)



Side View  
(reference only)

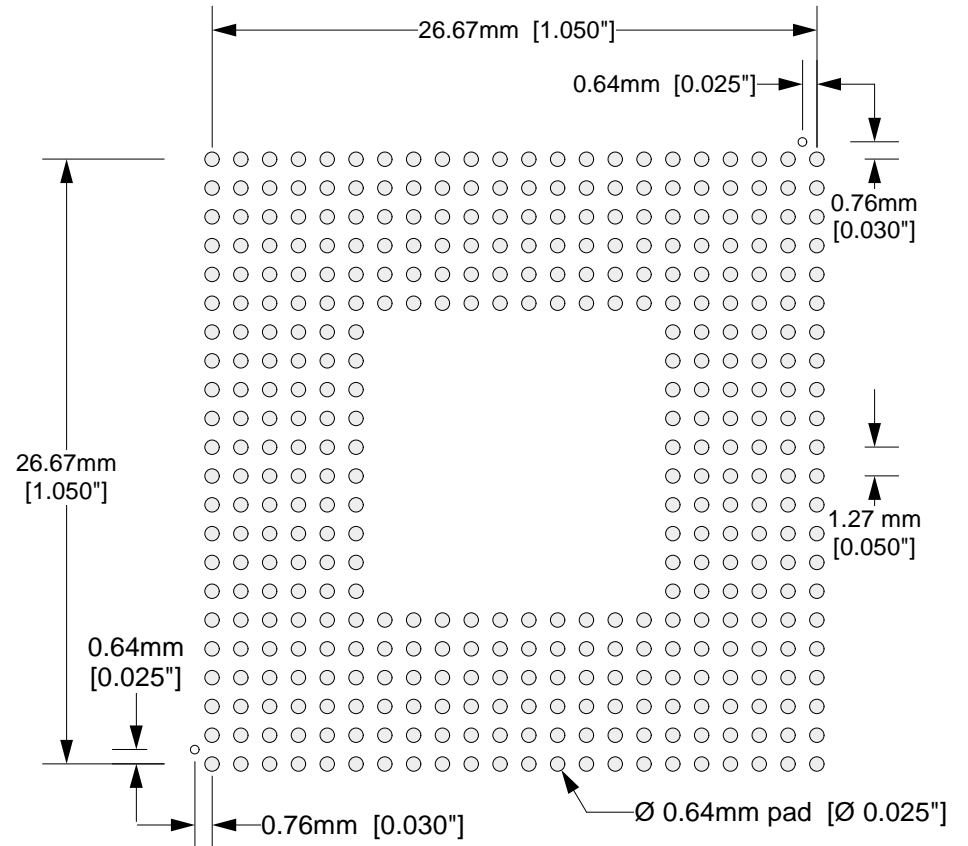
- 1 Substrate: 1.59mm  $\pm$ 0.18mm [0.0625"  $\pm$ 0.007"] FR4/G10 or equivalent high temp material. Non-clad.
- 2 Pins: material- Brass Alloy 360 1/2 hard; finish- 0.25 $\mu$ m [10 $\mu$ ] Au over 1.27 $\mu$ m [50 $\mu$ ] Ni (min.).
- 3 Balls: Eutectic 63/37 SnPb. Thermally isolated from terminal pins

**Note:** SMT foot is independent of actual BGA package thickness.

Description: BGA Emulator Foot (SM base).

384 position terminal pins (MGA, Mini-grid Array) to solder balls. Surface mounts to target BGA land pattern.


**Package Code: BGA384A**



Top View: Recommended PCB Layout  
Scale: 3:1

|                      |                                   |
|----------------------|-----------------------------------|
| Pin Count            | 384                               |
| Array Size           | 22 x 22                           |
| Pitch                | 1.27 mm [0.050"]                  |
| Perimeter size (XxY) | 29.0mm [1.142"] x 29.0mm [1.142"] |
| MGA Location (CxX)   | 1.17mm [0.046"] x 1.17mm [0.046"] |
| Ball Thickness (B)   | 0.61mm [0.024"]                   |

Tolerances: diameters  $\pm$ 0.03mm [ $\pm$ 0.001"], PCB perimeters  $\pm$ 0.13mm [ $\pm$ 0.005"], PCB thicknesses  $\pm$ 0.18mm [ $\pm$ 0.007"], pitches (from true position)  $\pm$ 0.08mm [ $\pm$ 0.003"], all other tolerances  $\pm$ 0.13mm [ $\pm$ 0.005"] unless stated otherwise. Materials and specifications are subject to change without notice.

|   |                               |         |                |
|---|-------------------------------|---------|----------------|
|  <p><b>SF-BGA384A-B-11 Drawing</b></p> <p>© 2004 IRONWOOD ELECTRONICS, INC.<br/>PO BOX 21151 ST. PAUL, MN 55121<br/>Tele: (651) 452-8100<br/>www.ironwoodelectronics.com</p> | Status: Released              | Scale - | Rev: A         |
|   | Drawing: B. Roux              |         | Date: 10/21/04 |
|   | File: SF-BGA384A-B-11 Dwg.mcd |         | Modified:      |