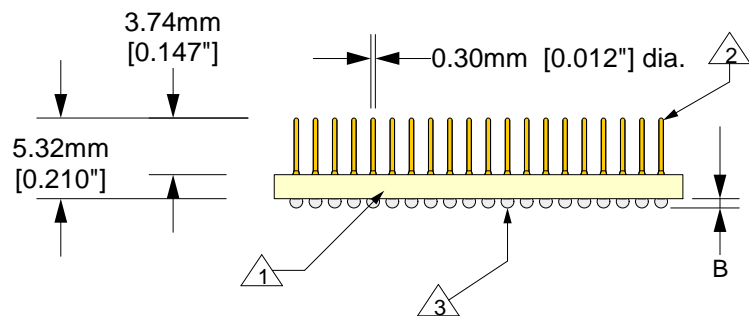


Top View
(reference only)

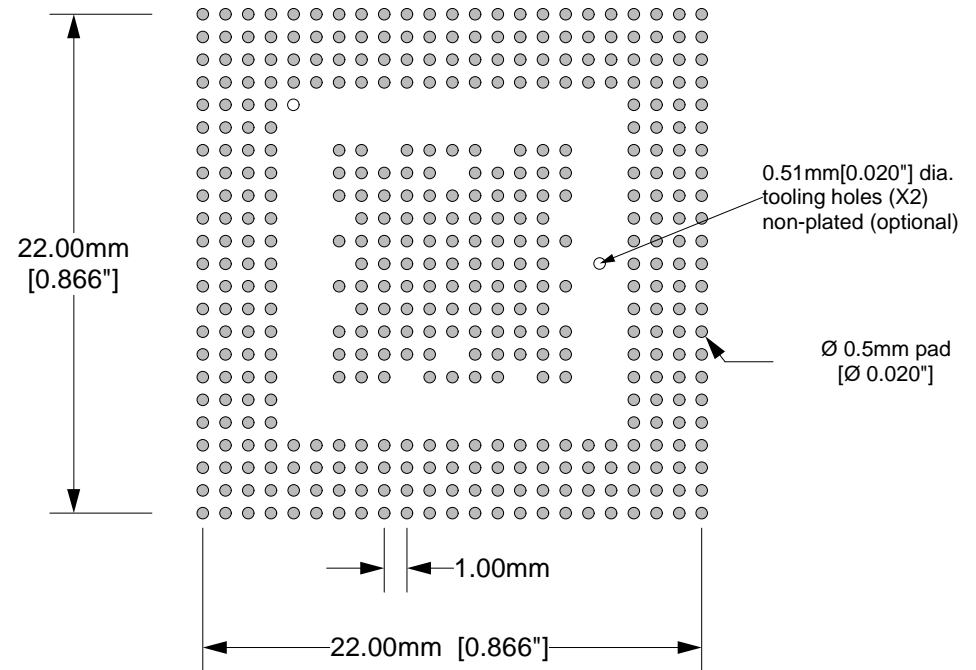


Side View
(reference only)

- 1 Substrate: 1.59mm \pm 0.18mm [0.0625" \pm 0.007"] FR4/G10 or equivalent high temp material. 17 μ m [1/2 oz.] Cu clad. SnPb plating.
- 2 Pins: material- Brass Alloy 360 1/2 hard; finish- 0.25 μ m [10 μ] Au over 1.27 μ m [50 μ] Ni (min.).
- 3 Balls: Eutectic 63/37 SnPb.

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

Package Code: BGA413A




Top View: Recommended PCB Layout
Scale: 2:1

Pin Count	413
Array Size	23 x 23
Pitch	1.0 mm
Perimeter size (XxY)	24.0mm[0.945"] X 24.0mm[0.945"]
MGA Location (CxD)	1.0mm[0.039"] X 1.0mm[0.039"]
Ball Thickness (B)	0.019"[0.483"]

Description: BGA Emulator Foot (solder base).

413 position terminal pins (UGA, Ultra Minigrig Array) to SM balls. Surface mounts to target BGA land pattern.

	SF-BGA413A-B-11 Drawing	Status: Released	Scale -	Rev: A
	© 2004 IRONWOOD ELECTRONICS, INC. PO BOX 21151 ST. PAUL, MN 55121 Tele: (651) 452-8100 www.ironwoodelectronics.com	Drawing: B. Roux	Date: 10/22/04	
		File: SF-BGA413A-B-11 Dwg.mcd	Modified:	

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.