

SEMI G72.1-0997

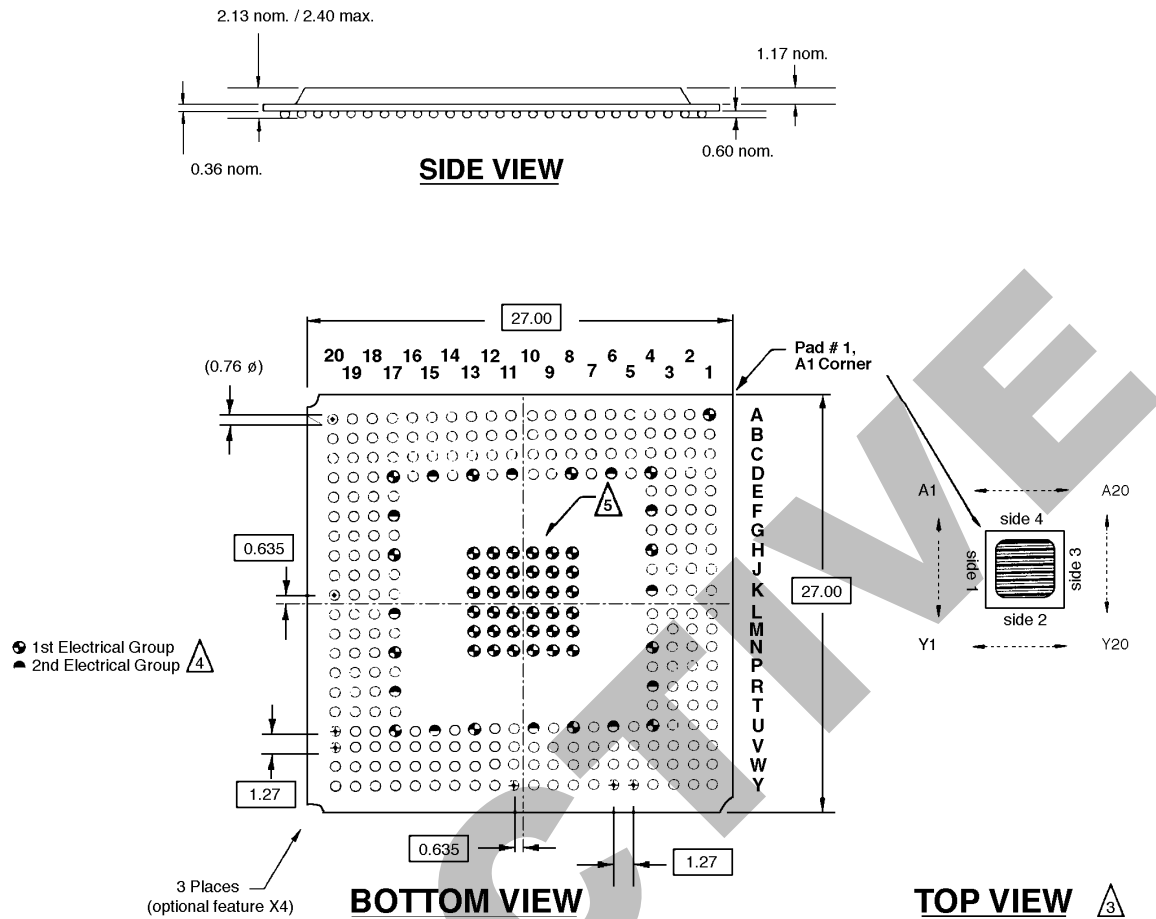
DESIGN PROPOSAL FOR BALL GRID ARRAY DESIGN LIBRARY:292

PIN PLASTIC BALL GRID ARRAY

Table 1 Plastic Ball Grid Array (PBGA) General Design Characteristics

<i>Ball Count</i>	<i>Signal I/O</i>	<i>Body Size</i>	<i>Pitch</i>	<i>Matrix</i>	<i>Array</i>	<i>Thermal Enhan.</i>	<i>Profile Height</i>	<i>Cavity Orient.</i>	<i>Wirebond Rings</i>
292	231	27x27	1.27	20x20	depopulated	6x6	2.13	up	2

<i>Substrate Material</i>	<i>Metal Layers</i>	<i>Die Inter-connect</i>	<i>Encapsulation Design / Material</i>	<i>Ball Composition</i>	<i>JEDEC Designation</i>	<i>Preconditioning Level</i>	<i>Design No.</i>	<i>SEMI Designation No.</i>
BT Laminate	2(2S0P0G)	wirebond	overmolded epoxy	63/37 Sn/Pb	MO-151 BAL-2, B	Level 3, Rev 0	PBD0001	G72.1



NOTES:

1. Refer to JEDEC MO-151 Issue B Variation BAL-2 for all dimensions and tolerances not shown. This design must be in full conformance with the referenced JEDEC outline drawing.
2. All dimensions are in millimeters unless otherwise noted.

3 Top View illustrates the relationship between external package features, internal wirebond pad number 1, and side 1, 2, 3, and 4 of the internal wirebond pads. Please see SEMI Standard BGA Design Netlist for specific electrical connections and more detailed notes.

4 Solder Balls with this symbol have common electrical connections, and may be connected to other internal package features. Please see SEMI Standard BGA Design Netlist for other specific electrical connections.

5 Thermal enhancement of 6 x 6 solder balls shown. Please see SEMI Standard BGA Design Netlist for other specific electrical connections.

Ball Count	Signal I/O	Body Size	Pitch	Matrix	Array	Thermal Enhanc.	Profile Height	Cavity Orientation	Wirebond Rings	Substrate Materials	Metal Layers	Die Inter-Connect	Encap. Design	Encap. Material	Ball Comp.	JEDEC Desig.	Preconditioning	
292	231	27 x 27	1.27	20 x 20	depop.	6 x 6	2.13	up	2	BT	2 (2SOPG)	wire bond	over mold	epoxy	63 / 37 Sn / Pb	MO-151 BAL-2, B	LEVEL 3, Rev. 0	
BGA DESIGN LIBRARY DRAWING TITLE						BGA DESIGN LIBRARY NO.				SEMI STANDARD BGA DESIGN LIBRARY General Specification						REV.	DATE	PAGE
292 PIN PLASTIC BALL GRID ARRAY 27 X 27mm BODY DESIGN						PBD0001										INITIAL	4/15/96	1 OF 8

Figure 1
292 Pin Plastic Ball Grid Array 27 x 27 mm Body Design

Table 2 292 Pin Plastic Ball Grid Array 27x27 mm Body Design

<i>Design No. PBD0001</i>	<i>SEMI Standard BGA Design Library</i>			<i>Date 6/20/96</i>	<i>Page 2 of 8</i>
<i>PBGA Wire Bond Pad (*1)</i>	<i>Solder Ball Location</i>	<i>Die Wire Bond Pad</i>	<i>I/O Name (& Comments) (*4)</i>	<i>Pkg. Side (*1)</i>	<i>Notes</i>
w/b ring 1	A1				3
230	A2			4	
225	A3			4	
222	A4			4	
218	A5			4	
215	A6			4	
213	A7			4	
210	A8			4	
206	A9			4	
202	A10			4	
201	A11			4	
198	A12			4	
194	A13			4	
191	A14			4	
188	A15			4	
184	A16			4	
181	A17			4	
180	A18			4	
175	A19			4	
174	A20			3	
1	B1			1	
229	B2			4	
228	B3			4	
224	B4			4	
221	B5			4	
217	B6			4	
214	B7			4	
211	B8			4	
207	B9			4	
203	B10			4	
199	B11			4	
197	B12			4	
193	B13			4	
190	B14			4	
187	B15			4	
183	B16			4	
177	B17			4	
176	B18			4	
173	B19			3	
171	B20			3	
6	C1			1	
2	C2			1	
231	C3			4	