

BGA Solder Spheres

Product Description

Amtech's BGA Solder Spheres are manufactured from virgin materials to meet or exceed the requirements of building or repairing BGA packages. AMTECH spheres also exceed both IPC and MIL standards for purity levels and size tolerances. Normal sizes are from 3 mil to 35 mil and custom solder sphere sizes are available upon request. Other alloys are available upon request.

Available Alloys

Alloy: Sn96.5/Ag3.0/Cu.5					
Element	Inspect to (% wt)	Element	Inspect to (% wt)	Element	Inspect to (% wt)
Sn	Balance	Al	0.001 Max	Cu	0.3-0.7
Pb	0.05 Max	As	0.03 Max	Fe	0.02 Max
Sb	0.05 Max	Bi	0.03 Max	Zn	0.001 Max
Ag	2.8-3.2	Cd	0.002 Max		
Ni	0.1 Max	Ge	0.1 Max		

Alloy: Sn63/Pb37					
Element	Inspect to (% wt)	Element	Inspect to (% wt)	Element	Inspect to (% wt)
Sn	62.5-63.5	Al	0.001 Max	Cu	0.5 Max
Pb	Balance	As	0.03 Max	Fe	0.02 Max
Sb	0.05 Max	Bi	0.03 Max	Zn	0.001 Max
Ag	ND	Cd	0.002 Max		
Ni	0.1 Max	Ge	ND		

Storage and Handling Procedures

Clean and dry environments are required for storage of solder spheres. Probing of solder spheres in containers with fingers or other implements can damage the solder spheres by changing the shape, scoring the surface or contaminating the surface by skin oils. Shelf life of all solder spheres, stored in sealed ESD containers that are not agitated, is one year.

Packaging

30mil - 8mil are packaged in 250k bottles and 6mil-4mil are packaged in 1kk bottles.

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Typical Diameters and Tolerances:

Diameters	Daimeters Tolerance	Spheroid Tolerance
0.889mm (35 mil)	+/- 0.025 mm	Within 1.5%
0.762mm (30 mil)	+/- 0.015 mm	Within 1.5%
0.635mm (25 mil)	+/- 0.015 mm	Within 1.5%
0.609mm (24 mil)	+/- 0.015 mm	Within 1.5%
0.558mm (22 mil)	+/- 0.015 mm	Within 1.5%
0.508mm (20 mil)	+/- 0.015 mm	Within 1.5%
0.457mm (18 mil)	+/- 0.015 mm	Within 1.5%
0.406mm (16 mil)	+/- 0.015 mm	Within 1.5%
0.380mm (15 mil)	+/- 0.015 mm	Within 1.5%
0.355mm (14 mil)	+/- 0.010 mm	Within 1.5%
0.305mm (12 mil)	+/- 0.010 mm	Within 1.5%
0.254mm (10 mil)	+/- 0.015 mm	Within 1.5%
0.203mm (8 mil)	+/- 0.010 mm	Within 1.5%
0.150mm (6 mil)	+/- 0.007 mm	Within 1.5%
0.100mm (4 mil)	+/- 0.005 mm	Within 1.5%
0.075mm (3 mil)	+/- 0.005 mm	Within 1.5%

NOTE: Not all diameters are available in Lead-free alloy.

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