Device Material Content

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Package: **516 fpBGA (w/heatsink)** **with SnPb Solder Balls**

Total Device Weight **4.97** **Grams**

January, 2005	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	1.59%	0.079			Silicon	7440-21-3	Die size: 9.63 x 11.36 mm
Mold	35.40%	1.760					Mold Compound composition:
			30.34%	1.508	Silica	60676-86-0	75 to 95% Silica Fused or Amorphous (LSC uses 85.7% in our calculation)
			3.54%	0.176	Epoxy/Phenol resin	129915-35-1	4 to 20% Epoxy/Phenol resin (LSC uses 10% in our calculation)
			0.53%	0.026	Metal Hydroxide	-	0 to 2.5% Metal Hydroxide (LSC uses 1.5% in our calculation)
			0.89%	0.044	Antimony Trioxide	1309-64-4	0 to 5% Antimony Trioxide (LSC uses 2.5% in our calculation)
			0.11%	0.005	Carbon black	1333-86-4	0 to 0.5% Carbon black (LSC uses 0.3% in our calculation)
							Mold Compound Density between 1.8 and 2.1 grams/cc
D/A Epoxy	0.22%	0.011					Die attach epoxy Density: 4 grams/cc
			0.18%	0.009	Silver (Ag)	7440-22-4	60 to 100% Silver (LSC uses 80% in our calculation)
			0.04%	0.002	Organic esters and resins	-	0 to 30% Organic Esters and Resins (LSC uses 20% in our calculation)
Wire	0.30%	0.015			Gold (Au)	7440-57-5	1.00 mil diameter; 1 wire per solder ball
Solder Balls	10.33%	0.514					
			5.41%	0.269	Tin (Sn)	7440-31-5	Solder ball composition Sn63/Pb37
			4.93%	0.245	Lead (Pb)	7439-92-1	
Substrate	16.16%	0.803				129915-35-1	BT Resin
Foil	35.98%	1.788			Copper (Cu)	7440-50-8	

Notes:

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

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