Device Material Content

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Package: 388 PBGA with SnPb Solder Balls
Total Device Weight 4.42 Grams

MSL: 3
Peak Reflow Temp: 225°C

February, 2011	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	2.38%	0.105			Silicon	7440-21-3	Die size: 10.91 x 13.36 mm
Mold	41.71%	1.844					Mold Compound composition:
			5.21%	0.230	Mold Epoxy resin	-	5 to 20% Epoxy resin (LSC uses 12.5% in our calculation)
			33.37%	1.475	Silica	60676-86-0	65 to 95% silica filler (LSC uses 80% in our calculation)
			1.04%	0.046	Antimony Pent/Trioxide	1309-64-4	0.5 to 5% Antimony Pent/Trioxide (LSC uses 2.5% in our calculation)
			2.10%	0.093	Other (trade secret)	-	LSC uses 5% in our calculation
							Mold Compound Density between 1.8 and 2.1 grams/cc
D/A Epoxy	0.34%	0.015			Silver-filled epoxy		Die attach epoxy Density: 4 grams/cc
			0.29%	0.013	Silver	7440-22-4	85% Silver
			0.05%	0.002	Esters & resins	-	15% Esters & resins
Wire	0.26%	0.011			Gold (Au)	7440-57-5	1.00 mil diameter; 1 wire per solder ball
Solder Balls	17.76%	0.785					
			9.29%	0.411	Tin (Sn)	7440-31-5	Solder ball composition Sn63/Pb37
			8.47%	0.374	Lead (Pb)	7439-92-1	
Substrate	23.17%	1.024					
			15.75%	0.696	Glass fiber	65997-17-3	60 to 75% glass fiber (LSC uses 68% in our calculation)
			7.42%	0.328	BT Resins	-	
Foil	14.39%	0.636			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.
Constituent substances and proportions in epoxy materials are before curing.
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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Rev. B