Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@lscc.com

Package: 208 fpBGA with SnPb Solder Balls
Total Device Weight 0.79 Grams

MSL: 3
Peak Reflow Temp: 225°C

November, 2009	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	2.50%	0.0197			Silicon chip	7440-21-3	Die size: 5.05 x 4.41 mm
Mold	37.02%	0.292					Mold Compound composition:
			29.06%	0.229	Silica (Fused or Amorphous)	60676-86-0	65 to 95% Silica (LSC uses 78.5% in our calculation)
			5.18%	0.0409	Epoxy/Phenol Resin	-	5 to 22% Epoxy/Phenol Resin (LSC uses 14% in our calculation)
			0.37%	0.0029	Brominated Epoxy Resin	68928-70-1	0 to 2% Brominated Epoxy Resin (LSC uses 1% in our calculation)
			0.93%	0.0073	Antimony Trioxide	1309-64-4	0 to 5% Antimony Trioxide (LSC uses 2.5% in our calculation)
			0.37%	0.0029	Antimony Pentoxide	1314-60-9	0 to 1.5% Antimony Pentoxide (LSC uses 1% in our calculation)
			0.93%	0.0073	Siloxanes	-	0 to 5% Siloxanes (LSC uses 2.5% in our calculation)
			0.19%	0.0015	Carbon Black	1333-86-4	0 to 1% Carbon Black (LSC uses 0.5% in our calculation)
							Mold Compound Density ranges between 1.8 and 2.1 grams/cc
D/A Epoxy	0.29%	0.0023					Die attach epoxy Density: 4 grams/cc
			0.23%	0.0018	Silver (Ag)	7440-22-4	60 to 100% Silver (LSC uses 80% in our calculation)
			0.06%	0.0005	Organic esters and resins	-	0 to 30% Organic Esters and Resins (LSC uses 20% in our calculation)
Wire	0.77%	0.0061			Gold (Au)	7440-57-5	0.8 to 1.0 mil diameter; 1 wire per package lead; wire length 3 mm
Solder Balls	30.38%	0.2397					
			19.14%	0.1510	Tin (Sn)	7440-31-5	Solder ball composition Sn63/Pb37
			11.24%	0.0887	Lead (Pb)	7439-92-1	
Substrate	22.77%	0.1796					
			15.48%	0.1222	Glass fiber	65997-17-3	60 to 75% glass fiber (LSC uses 68% in our calculation)
			7.29%	0.0575	BT Resins	-	
Foil	6.27%	0.0495			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.

www.latticesemi.com

Rev. B4