Device Material Content

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

Package: **208 ftBGA** **Side-by-side (dual-die)**
Total Device Weight **0.750** **Grams** **with SnAgCu Solder Balls**

Halogen Free
MSL: 3
Peak Reflow Temp: 260°C

February, 2012	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	1.48%	0.0111			Silicon chip	7440-21-3	Die size: 3.25 x 3.25 mm + 2.65 x 2.65 mm
Mold	54.91%	0.412					Mold Compound: Kyocera G2250LKDS series
			50.52%	0.3789	Silica	60676-86-0	75 to 95% Fused silica filler (LSC uses 92% in our calculation)
			2.75%	0.0206	Epoxy Resin	-	1 to 10% Epoxy resin (LSC uses 5% in our calculation)
			1.65%	0.0124	Phenol Resin	-	2 to 7% Phenal resin (LSC uses 3% in our calculation)
							Mold Compound Density ranges between 1.85 and 2.15 grams/cc
D/A Epoxy	0.24%	0.0018			Silver-filled epoxy		Die Attach: Ablebond 2100A
			0.19%	0.0014	Silver (Ag)	7440-22-4	70 to 100% Silver (LSC uses 80% in our calculation)
			0.05%	0.0004	Organic esters and resins	-	7 to 40% Organic Esters and Resins (LSC uses 20% in our calculation)
							Die attach epoxy Density: 4 grams/cc
Wire	0.40%	0.0030			Gold (Au)	7440-57-5	0.7 mil Au wire
Solder Balls	13.46%	0.1009					
			12.99%	0.0974	Tin (Sn)	7440-31-5	Solder ball composition Sn96.5%/Ag3.0%/Cu0.5%
			0.40%	0.0030	Silver (Ag)	7440-22-4	
			0.07%	0.0005	Copper (Cu)	7440-50-8	
Substrate	21.27%	0.1595					
			14.46%	0.1085	Glass fiber	65997-17-3	60 to 75% glass fiber (LSC uses 68% in our calculation)
			6.81%	0.0510	BT Resins	-	
Foil	8.25%	0.0619			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. A