Device Material Content

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Package: **121 ucBGA** **with SnAgCu Solder Balls**
Total Device Weight **0.04** **Grams**

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

August, 2012	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	3.10%	0.0013			Silicon chip	7440-21-3	Die size: 59 x 59 mil
Mold	53.98%	0.0226					Mold Compound: KEG1250 LKDS
			48.59%	0.0203	Silica	60676-86-0	75 to 95% Fused silica filler (LSC uses 90% in our calculation)
			2.97%	0.0012	Epoxy Resin	Trade secret	1 to 10% Epoxy resin (LSC uses 5.5% in our calculation)
			2.43%	0.0010	Phenol Resin	Trade secret	2 to 7% Phenol resin (LSC uses 4.5% in our calculation)
D/A Tape	0.15%	0.00006					TAPE FH-900T-25_HR9004
			0.02%	0.000008	Epoxy Resin	Trade secret	10 to 20% (LSC uses 12% in our calculation)
			0.02%	0.000008	Phenol Resin	Trade secret	10 to 20% (LSC uses 12% in our calculation)
			0.01%	0.000004	SiO2 Filler	Trade secret	1 to 10% (LSC uses 6% in our calculation)
			0.11%	0.000046	(Meta)Acrylic Copolymer	Trade secret	65 to 75% (LSC uses 70% in our calculation)
Wire	1.39%	0.0006					0.7 MIL Pd COATED Cu
			1.360%	0.00057	Copper (Cu)	7440-50-8	97.30%
			0.040%	0.00002	Palladium (Pd)	7440-05-3	2.70%
Solder Balls	2.49%	0.00104					
			2.45%	0.00103	Tin (Sn)	7440-31-5	10 mils Sn98.5 / Ag1.0 / Cu0.5 (SAC105)
			0.02%	0.00001	Silver (Ag)	7440-22-4	
			0.01%	0.000004	Copper (Cu)	7440-50-8	
Substrate	38.88%	0.01627					CCL-HL832NX(A-HS) / AUS 308
			18.52%	0.00775	BT Resin CCL-HL832NX	Trade secret	47.62%
			11.76%	0.00492	Copper (Cu)	7440-50-8	30.24%
			5.56%	0.00233	Soldermask AUS 308	Trade secret	14.29%
			2.78%	0.00116	Nickel Plating	7440-02-0	7.14%
			0.28%	0.00012	Gold Plating	7440-57-5	0.71%

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