Device Material Content

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Package: 381 caBGA
Total Device Weight 1.020 Grams

Package Code: BG381
Products: LAE5

Assembly: ASEM
Size (mm): 17 x 17
Lead pitch (mm): 0.8
MSL: 3
Reflow max (^{o}C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.54%	0.0157	1.54%	0.0157	Silicon chip	7440-21-3	100.00%	Die size: 5.02 x 5.42mm
Mold Compound	42.22%	0.4306	2.11%	0.0215	Epoxy Resin A	-	5.00%	Mold Compound: Sumitomo G750SE (ULA)
			0.63%	0.0065	Epoxy Resin B	-	1.50%	
			2.11%	0.0215	Phenol Novolac	9003-35-4	5.00%	
			2.11%	0.0215	Metal Hydroxide	-	5.00%	
			0.13%	0.0013	Carbon Black	1333-86-4	0.30%	
			35.13%	0.3583	Silica Fused	60676-86-0	83.20%	
D/A Epoxy	0.22%	0.0023	0.18%	0.00183	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00046	Esters & resins	-	20.00%	
Wire	0.65%	0.0067	0.65%	0.0066	Gold	7440-57-5	99.00%	0.8 mil diameter; 1 wire per solder ball
			0.01%	0.0001	Palladium	7440-05-3	1.00%	
Solder Balls	9.31%	0.0949	8.98%	0.0916	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.28%	0.0028	Silver (Ag)	7440-22-4	3.00%	
			0.05%	0.0005	Copper (Cu)	7440-50-8	0.50%	
Substrate	29.43%	0.3002	9.12%	0.0931	BT Resins	-	31.00%	BT Resin CCL-HL832NX*
			20.02%	0.2041	Glass fiber	65997-17-3	68.00%	
			0.29%	0.0030	Bisphenol A	80-05-7	1.00%	
Foil	11.68%	0.1191	9.95%	0.1015	Copper	7440-50-8	85.21%	
			1.64%	0.0168	Nickel plating	7440-02-0	14.08%	
			0.08%	0.0008	Gold plating	7440-57-5	0.71%	
Solder Mask	4.93%	0.0503	2.77%	0.0283	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.79%	0.0080	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.08%	0.0111	Barium Sulfate	7727-43-7	22.00%	
			0.15%	0.0015	Talc	14807-96-6	3.00%	
			0.02%	0.0003	Naphthalene	91-20-3	0.50%	
			0.11%	0.0012	Trade secret ingredients	-	2.30%	

Notes: SVHC: * 0.29% max. concentration of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.

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