Device Material Content

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Package: 256 caBGA
Total Device Weight 0.532 Grams

Package Code: BBG256
Products: XO4

Assembly: ASEM
Size (mm): 14 x 14
Lead pitch (mm): 0.8
MSL: 3
Reflow max (ºC): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.741%	0.00926						
			1.741%	0.00926	Silicon chip	7440-21-3	100.000%	
Mold Compound	51.184%	0.27228						Mold Compound: Sumitomo G750SE (ULA)
			3.583%	0.01906	Epoxy Resin	-	7.000%	
			2.559%	0.01361	Phenol Novolac	9003-35-4	5.000%	
			2.559%	0.01361	Metal hydroxide	-	5.000%	
			0.256%	0.00136	Carbon Black	1333-86-4	0.500%	
			42.226%	0.22463	Silica Fused	60676-86-0	82.500%	
D/A Epoxy	0.281%	0.00150						Die attach epoxy: Henkel (Ablebond) ABL 2100A
			0.232%	0.00123	Silver (Ag)	7440-22-4	82.432%	
			0.016%	0.00008	2,2-dimethyl-1,3 Propanediyl Bismethacrylate	1985-51-9	5.667%	
			0.016%	0.00008	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	-	5.667%	
			0.016%	0.00008	2-[[2,2 bis[[(1-oxoally)oxy]methyl]butoxy]methyl]-2-ethyl-1.3-propanediyl diacrylate	94108-97-1	5.667%	
			0.002%	0.00001	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.567%	
Wire	0.653%	0.00347						0.8 mil diameter; 1 wire per solder ball
			0.634%	0.00337	Copper (Cu)	7440-50-8	97.200%	AuPCC+
			0.016%	0.00009	Palladium (Pd)	7440-05-3	2.500%	
			0.002%	0.00001	Gold (Au)	7440-57-5	0.300%	
Solder Balls	18.260%	0.09713						SAC305
			17.621%	0.09374	Tin (Sn)	7440-31-5	96.500%	
			0.548%	0.00291	Silver (Ag)	7440-22-4	3.000%	
			0.091%	0.00049	Copper (Cu)	7440-50-8	0.500%	
Substrate	17.535%	0.09328						BT Resin CCL-HL832NX-A
			3.633%	0.01932	Continuous Filament Fiber Glass	65997-17-3	20.717%	
			1.981%	0.01054	Bismaleimide Triazine	105391-33-1	11.300%	
			1.981%	0.01054	Cyanic acid (1-methylethylidene)di-4,1-phenylene ester homopolymer	25722-66-1	11.300%	
			1.981%	0.01054	Other Resin	9003-36-5	11.300%	
			1.431%	0.00761	Aluminum Hydroxide	21645-51-2	8.161%	
			6.527%	0.03472	Copper	7440-50-8	37.223%	
Foil	6.167%	0.03281						
			4.821%	0.02564	Copper	7440-50-8	78.165%	
			1.129%	0.00601	Nickel	7440-02-0	18.309%	
			0.217%	0.00116	Gold	7440-57-5	3.526%	
Solder Mask	4.180%	0.02224						Solder mask: PSR4000 AUS 308
			1.843%	0.00981	Plastic PAK	Not Specified	44.100%	*Taiyo Ink Cured Material Chemical Composition*
			1.216%	0.00647	Barium Sulfate	7727-43-7	29.100%	
			0.819%	0.00436	Plastics EP	Not Specified	19.600%	
			0.125%	0.00067	Talc	14807-96-6	3.000%	
			0.063%	0.00033	Natural Ingredient	Trade Secret	1.500%	
			0.063%	0.00033	Additives, Trade Secret	Trade Secret	1.500%	
			0.025%	0.00013	Silicon Dioxide	7631-86-9	0.600%	
			0.025%	0.00013	Pigment	Trade Scret	0.600%	
	100.000%	0.5320	100.000%	0.5320				

Note:

Br/Cl/Sb

Pb lead-free RoHS

Rev. A