Device Material Content

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Package: 132 csBGA
Total Device Weight 0.124 **Grams**

Package Code: MN132
Products: LC4kZC

Assembly: ASEM
Size (mm): 8 x 8
Lead pitch (mm): 0.5
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	6.93%	0.0086	6.93%	0.0086	Silicon chip	7440-21-3	100.00%	Die size: 4.71 x 2.90 mm
Mold Compound	55.08%	0.0683	48.47%	0.0601	Silica Fused	60676-86-0	88.00%	Mold Compound: Sumitomo G770
			2.75%	0.0034	Epoxy Resin	-	5.00%	
			2.75%	0.0034	Phenol Resin	-	5.00%	
			0.96%	0.0012	Metal Hydroxide	-	1.75%	
			0.14%	0.0002	Carbon Black	1333-86-4	0.25%	
D/A Epoxy	1.12%	0.0014	0.90%	0.00111	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.22%	0.00028	Esters & resins	-	20.00%	
Wire	3.12%	0.0039	3.08%	0.0038	Gold (Au)	7440-57-5	98.50%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	11.20%	0.0139	10.81%	0.0134	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.34%	0.0004	Silver (Ag)	7440-22-4	3.00%	
			0.06%	0.0001	Copper (Cu)	7440-50-8	0.50%	
Substrate	14.66%	0.0182	4.69%	0.0058	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			9.97%	0.0124	Glass fiber	65997-17-3	68.00%	
Foil	5.48%	0.0068	4.63%	0.0057	Copper	7440-50-8	84.56%	
			0.81%	0.0010	Nickel plating	7440-02-0	14.70%	
			0.04%	0.0001	Gold plating	7440-57-5	0.74%	
Solder Mask	2.42%	0.0030	1.31%	0.00163	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.18%	0.00022	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.08%	0.00010	Morpholine derivative**	71868-10-5	3.32%	
			0.07%	0.00009	Silicon dioxide	7631-86-9	3.00%	
			0.07%	0.00009	Silica, amorphous	112945-52-5	3.00%	
			0.01%	0.00001	Carbon black	1333-86-4	0.24%	
			0.69%	0.00086	Trade secret ingredients	-	28.74%	

Notes: SVHC:
* 0.15% max. concentration of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.
** 0.08% max. concentration of Morpholine derivative (CAS# 71868-10-5), contained in solder mask material.

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