



Device Material Content

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Package: 328 csBGA
Total Device Weight 0.31 Grams

Package Code:

MG328

Products:

LAE3

Assembly: ASEM
Size (mm): 10 x 10
Lead pitch (mm): 0.5
MSL: 3
Reflow max (°C): 260

June, 2022

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	4.49%	0.0139	4.49%	0.0139	Silicon chip	7440-21-3	100.00%	Die size: 4.60 x 5.20 mm
Mold Compound	49.30%	0.1528	2.46% 2.46% 0.10% 43.28% 0.99%	0.0076 0.0076 0.0003 0.1342 0.0031	Epoxy Resins Phenol Resin Carbon Black Silica Others	- - 1333-86-4 60676-86-0 -	5.00% 5.00% 0.20% 87.80% 2.00%	Mold Compound: Hitachi CEL9750ZHF10AKL-U (ULA)
D/A Epoxy	0.69%	0.0021	0.55% 0.14%	0.00170 0.00043	Silver (Ag) Organic esters & resins	7440-22-4 -	80.00% 20.00%	Die attach epoxy: Henkel (Ablebond) 2100A
Wire	1.68%	0.0052	1.68%	0.0052	Gold (Au)	7440-57-5	100.00%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	11.11%	0.0344	10.72% 0.33% 0.06%	0.0332 0.0010 0.0002	Tin (Sn) Silver (Ag) Copper (Cu)	7440-31-5 7440-22-4 7440-50-8	96.50% 3.00% 0.50%	SAC305
Substrate	15.98%	0.0495	5.11% 10.86%	0.0158 0.0337	BT Resins Glass fiber	- 65997-17-3	32.00% 68.00%	BT Resin CCL-HL832NX-A
Foil	11.56%	0.0358	8.02% 2.88% 0.65%	0.0249 0.0089 0.0020	Copper Nickel Gold	7440-50-8 7440-02-0 7440-57-5	69.41% 24.93% 5.67%	
Solder Mask	5.21%	0.0161	2.93% 0.83% 1.15% 0.16% 0.15%	0.00907 0.00258 0.00355 0.00048 0.00045	Quartz 3-methoxy-3-methylbutylacetate Barium Sulfate Talc (containing no asbestiform fibers) Trade secret ingredients	14808-60-7 103429-90-9 7727-43-7 14807-96-6 -	56.20% 16.00% 22.00% 3.00% 2.80%	Solder mask PSR4000 AUS 308

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