



## Device Material Content

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Assembly: ASEM

Size (mm): 6 x 6

Lead pitch (mm): 0.5

MSL: 3

Reflow max (°C): 260

Package: 56 csBGA

Package Code:

MN56

Total Device Weight 0.08 Grams

Products:

LC4kZC

August, 2019

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	2.56%	0.0021	2.56%	0.0021	Silicon chip	7440-21-3	100.00%	Die size: 1.77 x 1.91 mm
Mold Compound	55.11%	0.0457	48.50%	0.0403	Silica Fused	60676-86-0	88.00%	Mold Compound: Sumitomo G770
			2.76%	0.0023	Epoxy Resin	-	5.00%	
			2.76%	0.0023	Phenol Resin	-	5.00%	
			0.96%	0.0008	Metal Hydroxide	-	1.75%	
			0.14%	0.0001	Carbon Black	1333-86-4	0.25%	
D/A Epoxy	0.41%	0.0003	0.33%	0.00027	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.08%	0.00007	Esters & resins	-	20.00%	
Wire	1.98%	0.0016	1.95%	0.0016	Gold (Au)	7440-57-5	98.50%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	7.10%	0.0059	6.85%	0.0057	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.21%	0.0002	Silver (Ag)	7440-22-4	3.00%	
			0.04%	0.0000	Copper (Cu)	7440-50-8	0.50%	
Substrate	21.34%	0.0177	6.83%	0.0057	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			14.51%	0.0120	Glass fiber	65997-17-3	68.00%	
Foil	7.97%	0.0066	6.74%	0.00560	Copper	7440-50-8	84.56%	
			1.17%	0.00097	Nickel plating	7440-02-0	14.70%	
			0.06%	0.00005	Gold plating	7440-57-5	0.74%	
Solder Mask	3.52%	0.0029	1.91%	0.00159	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.26%	0.00021	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.12%	0.00010	Morpholine derivative	71868-10-5	3.32%	
			0.11%	0.00009	Silicon dioxide	7631-86-9	3.00%	
			0.11%	0.00009	Silica, amorphous	112945-52-5	3.00%	
			0.01%	0.00001	Carbon black	1333-86-4	0.24%	
			1.01%	0.00084	Trade secret ingredients	-	28.74%	

Notes: \* 0.21% max. concentration (of total pkg wt.) of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.

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