



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com		Package: 56 csBGA Total Device Weight 0.08 Grams			Package Code: MN56	Assembly: ASEM Size (mm): 6 x 6 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260		
June, 2022					Products: LC4kZC			
	% 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 Epoxy Resin Phenol Resin Metal Hydroxide Carbon Black	60676-86-0	88.00%	Mold Compound: Sumitomo G770
			2.76%	0.0023		-	5.00%	
			2.76%	0.0023		-	5.00%	
			0.96%	0.0008		-	1.75%	
			0.14%	0.0001		1333-86-4	0.25%	
D/A Epoxy	0.41%	0.0003	0.33%	0.00027	Silver Esters & resins	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.08%	0.00007		-	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) Silver (Ag) Copper (Cu)	7440-31-5	96.50%	SAC305
			0.21%	0.0002		7440-22-4	3.00%	
			0.04%	0.0000		7440-50-8	0.50%	
Substrate	21.34%	0.0177	6.62%	0.0055	BT Resins Glass fiber	-	31.00%	BT Resin CCL-HL832NX-A
			14.51%	0.0120		65997-17-3	68.00%	
Foil	7.97%	0.0066	6.74%	0.00560	Copper Nickel Gold	7440-50-8	84.56%	
			1.17%	0.00097		7440-02-0	14.70%	
			0.06%	0.00005		7440-57-5	0.74%	
Solder Mask	3.52%	0.0029	1.98%	0.00164	Quartz 3-methoxy-3-methylbutylacetate Barium Sulfate Talc (containing no asbestiform fibers) Trade secret ingredients	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.56%	0.00047		103429-90-9	16.00%	
			0.77%	0.00064		7727-43-7	22.00%	
			0.11%	0.00009		14807-96-6	3.00%	
			0.10%	0.00008		-	2.80%	

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