



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Package Code: FN672		Assembly: ASEM Size (mm): 27 x 27 Lead pitch (mm): 1.0 MSL: 3 Reflow max (°C): 250	
Package: 672 fpBGA		Total Device Weight 3.30 Grams		Products: LAE3				
June, 2022								
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.48%	0.0489	1.48%	0.0489	Silicon chip	7440-21-3	100.00%	Die size: 8.11 x 8.34 mm
Mold Compound	36.73%	1.2119	1.84%	0.0606	Epoxy Resin	-	5.00%	Mold Compound: Hitachi CEL9750ZHF10AKL-U (ULA)
			1.84%	0.0606	Phenol Resin	-	5.00%	
			0.07%	0.0024	Carbon Black	1333-86-4	0.20%	
			32.24%	1.0641	Silica	60676-86-0	87.80%	
			0.73%	0.0242	Others	-	2.00%	
D/A Epoxy	0.21%	0.0069	0.17%	0.00550	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00137	Esters & resins	-	20.00%	
Wire	0.60%	0.0198	0.59%	0.0195	Gold (Au)	7440-57-5	98.50%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	19.89%	0.6563	19.19%	0.6333	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.60%	0.0197	Silver (Ag)	7440-22-4	3.00%	
			0.10%	0.0033	Copper (Cu)	7440-50-8	0.50%	
Substrate	24.25%	0.8002	7.76%	0.2561	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			16.49%	0.5441	Glass fiber	65997-17-3	68.00%	
Foil	11.03%	0.3639	9.04%	0.2984	Copper	7440-50-8	82.00%	
			1.66%	0.0549	Nickel plating	7440-02-0	15.10%	
			0.32%	0.0106	Gold plating	7440-57-5	2.91%	
Solder Mask	5.82%	0.1922	3.27%	0.1080	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.93%	0.0308	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.28%	0.0423	Barium Sulfate	7727-43-7	22.00%	
			0.17%	0.0058	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.16%	0.0054	Trade secret ingredients	-	2.80%	

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.
 Constituent substances and proportions in epoxy materials are before curing.
 The information provided above is representative of the package as of the date listed, and is subject to change at any time.
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