



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Package Code: BBG400		Assembly: ASEM Size (mm): 17 x 17	
Package: 400 caBGA Total Device Weight 0.747 Grams					Products: XO4 (except 110)		Lead pitch (mm): 0.8 MSL: 3 Reflow max (°C): 260	
July, 2026	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.39%	0.0104	1.39%	0.0104	Silicon chip	7440-21-3	100.00%	
Mold Compound	51.80%	0.3871	3.63%	0.0271	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			2.59%	0.0194	Phenol Novolac	9003-35-4	5.00%	
			2.59%	0.0194	Metal Hydroxide	-	5.00%	
			0.26%	0.0019	Carbon Black	1333-86-4	0.50%	
			42.74%	0.3194	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.21%	0.00157	0.17%	0.00129	Silver	7440-22-4	82.43%	Die attach epoxy: Henkel (Ablebond) ABL 2100A
			0.01%	0.00009	2,2-dimethyl-1,3-propanediyl bismethacrylate	1985-51-9	5.67%	
			0.01%	0.00009	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	-	5.67%	
			0.01%	0.00009	2-[[2,2 bis[[[(1-oxoallyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl diacrylate	94108-97-1	5.67%	
			0.00%	0.000009	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.57%	
Wire	0.72%	0.0054	0.70%	0.0052	Copper (Cu)	7440-50-8	97.20%	0.8 mil diameter; 1 wire per solder ball AuPCC+
			0.02%	0.00013	Palladium (Pd)	7440-05-3	2.50%	
			0.002%	0.00002	Gold (Au)	7440-57-5	0.30%	
Solder Balls	20.03%	0.1497	19.33%	0.1444	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.60%	0.0045	Silver (Ag)	7440-22-4	3.00%	
			0.10%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	16.80%	0.1256	5.38%	0.0402	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			11.43%	0.0854	Glass fiber	65997-17-3	68.00%	
Foil	6.28%	0.0469	5.31%	0.0397	Copper	7440-50-8	84.56%	
			0.92%	0.0069	Nickel	7440-02-0	14.70%	
			0.05%	0.0003	Gold	7440-57-5	0.74%	
Solder Mask	2.77%	0.0207	1.56%	0.0116	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.44%	0.0033	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			0.61%	0.0046	Barium Sulfate	7727-43-7	22.00%	
			0.08%	0.0006	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.08%	0.0006	Trade secret ingredients	-	2.80%	
100.00%		0.747	100.00%	0.747	800.00%			

Note:

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