



Device Material Content

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Package:
Total Device Weight

324 csfBGA
294.85 Milligrams

Package Code:
MG324

Products:
XO3L/LF

Assembly: ASEK
Size (mm): 9 x 9
Lead pitch (mm): 0.5
MSL: 3
Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (mg)	% of Total Pkg. Wt.	Weight (mg)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	2.95%	8.711	2.95%	8.711	Silicon chip	7440-21-3	100.00%	Die size: 4.452 x 4.364
Mold Compound	67.45%	198.886	8.09%	23.866	Epoxy Resins	-	12.00%	Sumitomo EME-G311SAC
			3.37%	9.944	Phenol Resins	-	5.00%	
			50.59%	149.165	Silica(Amorphous)	7631-86-9	75.00%	
			5.06%	14.916	Aluminum Hydroxide	21645-51-2	7.50%	
			0.34%	0.994	Carbon Black	1333-86-4	0.50%	
Substrate	10.17%	30.000	3.26%	9.600	BT Resins	-	32.00%	CCL-HL832NS
			6.92%	20.400	Glass fiber	65997-17-3	68.00%	
Foil	6.56%	19.335	6.555%	19.327	Copper (Cu)	7440-50-8	99.96%	
			0.003%	0.008	OSP	-	0.04%	
Solder Mask	0.67%	1.977	0.16%	0.465	Solvent naphtha (petroleum)	64742-94-5	23.52%	Solder mask PSR4000 AUS 320
			0.04%	0.116	Naphthalene	91-20-3	5.87%	
			0.10%	0.291	Phosphin oxide derivative	-	14.70%	
			0.10%	0.291	Talc	14807-96-6	14.70%	
			0.12%	0.349	Dipropylene glycol monomethyl Ether	34590-94-8	17.63%	
			0.10%	0.291	Epoxy Resin	85954-11-6	14.70%	
			0.06%	0.176	Barium Sulfate	7727-43-7	8.88%	
Bump	0.25%	0.727	0.024%	0.072	Tin (Sn)	7440-31-5	9.86%	
			0.0005%	0.001	Silver (Ag)	7440-22-4	0.20%	
			0.205%	0.604	Nickel (Ni)	7440-02-0	83.04%	
			0.017%	0.050	Copper (Cu)	7440-50-8	6.90%	
Polyamic Ester	0.048%	0.142	0.027%	0.080	N-Methyl-2-pyrrolidone	872-50-4	56.00%	HD4100
			0.018%	0.053	Non regulated ingredients	-	37.00%	
			0.003%	0.009	Proprietary Monomer	-	6.50%	
			0.000%	0.001	Methanol	67-56-1	0.50%	
RDL 1	0.003%	0.010	0.003%	0.010	Titanium (Ti)	7440-32-6	100.00%	
RDL 2	0.28%	0.811	0.28%	0.811	Copper (Cu)	7440-50-8	100.00%	
UBM	0.02%	0.049	0.003%	0.010	Titanium (Ti)	7440-32-6	20.41%	
			0.013%	0.039	Copper (Cu)	7440-50-8	79.59%	
Solder Balls	11.60%	34.200	11.193%	33.003	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.348%	1.026	Silver (Ag)	7440-22-4	3.00%	
			0.058%	0.171	Copper (Cu)	7440-50-8	0.50%	
100.00%		294.85	100.00%	294.85				

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Br/Cd/Sb

Pb

lead-free

RoHS

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