

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Assembly: ASEK Size (mm): 6 x 6 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260			
September, 2024		Package: 121 csfBGA Total Device Weight 176.3 Milligrams		Package Code: MG121				
				Products: XO3L/LF				
	% of Total Pkg. Wt.	Weight (mg)	% of Total Pkg. Wt.	Weight (mg)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	3.61%	6.365	3.61%	6.365	Silicon chip	7440-21-3	100.00%	Die size: 4.452 x 4.364
Mold Compound	77.74%	137.045	9.33%	16.445	Epoxy Resins	-	12.00%	Sumitomo EME-G311SAC
			3.89%	6.852	Phenol Resins	-	5.00%	
			58.31%	102.784	Silica(Amorphous)	7631-86-9	75.00%	
			5.83%	10.278	Aluminum Hydroxide	21645-51-2	7.50%	
			0.39%	0.685	Carbon Black	1333-86-4	0.50%	
Substrate	6.13%	10.800	1.96%	3.456	BT Resins	-	32.00%	CCL-HL832NS
			4.17%	7.344	Glass fiber	65997-17-3	68.00%	
Foil	4.20%	7.406	4.200%	7.403	Copper (Cu)	7440-50-8	99.96%	
			0.002%	0.003	OSP	-	0.04%	
Solder Mask	0.37%	0.644	0.09%	0.151	Solvent naphtha (petroleum)	64742-94-5	23.52%	Solder mask PSR4000 AUS 320
			0.02%	0.038	Naphthalene	91-20-3	5.87%	
			0.05%	0.095	Phosphinoxide derivative	-	14.70%	
			0.05%	0.095	Talc	14807-96-6	14.70%	
			0.06%	0.114	Dipropylene glycol monomethyl Ether	34590-94-8	17.63%	
			0.05%	0.095	Epoxy Resin	85954-11-6	14.70%	
			0.03%	0.057	Barium Sulfate	7727-43-7	8.88%	
Bump	0.29%	0.507	0.028%	0.050	Tin (Sn)	7440-31-5	9.86%	
			0.001%	0.001	Silver (Ag)	7440-22-4	0.20%	
			0.239%	0.421	Nickel (Ni)	7440-02-0	83.04%	
			0.020%	0.035	Copper (Cu)	7440-50-8	6.90%	
Polyamic Ester	0.06%	0.104	0.033%	0.058	N-Methyl-2-pyrrolidone	872-50-4	56.00%	HD4100
			0.022%	0.038	Non regulated ingredients	-	37.00%	
			0.004%	0.007	Proprietary Monomer	-	6.50%	
			0.000%	0.001	Methanol	67-56-1	0.50%	
RDL 1	0.004%	0.007	0.004%	0.007	Titanium (Ti)	7440-32-6	100.00%	
RDL 2	0.34%	0.593	0.34%	0.593	Copper (Cu)	7440-50-8	100.00%	
UBM	0.02%	0.035	0.004%	0.007	Titanium (Ti)	7440-32-6	20.00%	
			0.016%	0.028	Copper (Cu)	7440-50-8	80.00%	
Solder Balls	7.24%	12.770	6.991%	12.323	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.217%	0.383	Silver (Ag)	7440-22-4	3.00%	
			0.036%	0.064	Copper (Cu)	7440-50-8	0.50%	
100.00%		176.276	100.00%	176.276				

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Br/C/Sb

lead-free

RoHS

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