

Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com		Package: 256 ftBGA (v.1) Total Device Weight 0.705 Grams			Package Code: FTN256 Products: XO, XP2		Assembly: ASEM Size (mm): 17 x 17 Lead pitch (mm): 1.0 MSL: 3 Reflow max (°C): 260	
April, 2025								
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.00%	0.0071	1.00%	0.0071	Silicon chip	7440-21-3	100.00%	
Mold Compound	55.88%	0.3940	3.91%	0.0276	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			2.79%	0.0197	Phenol Novolac	9003-35-4	5.00%	
			2.79%	0.0197	Metal Hydroxide	-	5.00%	
			0.28%	0.0020	Carbon Black	1333-86-4	0.50%	
			46.10%	0.3250	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.16%	0.0011	0.13%	0.00093	Silver (Ag)	7440-22-4	82.43%	Die attach epoxy: Henkel (Ablebond) ABL 2100A
			0.01%	0.00006	2,2-dimethyl-1,3 Propanediyl Bismethacrylate	1985-51-9	5.67%	
			0.01%	0.00006	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	-	5.67%	
			0.01%	0.00006	2-[[2,2 bis[[1-oxoallyloxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl diacrylate	94108-97-1	5.67%	
			0.001%	0.00001	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.57%	
Wire	0.49%	0.0035	0.47%	0.0033	Copper (Cu)	7440-50-8	96.55%	0.8 mil diameter; 1 wire per solder ball
			0.02%	0.0001	Palladium (Pd)	2023568	3.10%	
			0.002%	0.00001	Gold (Au)	7440-57-5	0.35%	
Solder Balls	13.78%	0.0971	13.30%	0.0937	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.41%	0.0029	Silver (Ag)	7440-22-4	3.00%	
			0.07%	0.0005	Copper (Cu)	7440-50-8	0.50%	
Substrate Core	13.11%	0.0924	4.33%	0.0305	Continuous Filament Fiber Glass	65997-17-3	33.00%	BT Resin CCL-HL832NX-A
			2.36%	0.0166	Bismaleimide Triazine	105391-33-1	18.00%	
			2.36%	0.0166	Epoxy Resin	25722-66-1	18.00%	
			2.36%	0.0166	Other Resin	25722-66-1	18.00%	
			1.70%	0.0120	Inorganic Filler	21645-51-2	13.00%	
Foil	7.43%	0.0524	7.03%	0.0495	Copper	7440-50-8	94.58%	
			0.34%	0.0024	Nickel	7440-02-0	4.54%	
			0.07%	0.0005	Gold	7440-57-5	0.89%	
Solder Mask	8.15%	0.0575	0.33%	0.0023	Morpholine Derivative	-	4.00%	Solder mask PSR4000 AUS 308
			3.75%	0.0264	Barium Sulfate	7727-43-7	46.00%	
			0.08%	0.0006	Silica	7631-86-9	1.00%	
			0.33%	0.0023	Talc (containing no asbestiform fibers)	14807-96-6	4.00%	
			1.96%	0.0138	Dipropylene Glycol Monomethyl Ether	34590-94-8	24.00%	
			1.71%	0.0121	Epoxy Resin	85954-11-6	21.00%	
	100.00%	0.705	100.00%	0.705				

Notes:

Lattice regards this materials information to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Lattice subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Lattice has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Lattice products.

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5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com				Package Code: FTN256			Assembly: ASEK Size (mm): 17 x 17 Lead pitch (mm): 1.0 MSL: 3 Reflow max (°C): 260		
Package: 256 ftBGA (v.1)		Total Device Weight: 0.705 Grams		Products: XO, XP2					
April, 2025									
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:	
Die	1.00%	0.0071	1.00%	0.0071	Silicon chip	7440-21-3	100.00%		
Mold Compound	55.88%	0.3940	48.90%	0.3447	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KE-G2250 series	
			3.63%	0.0256	Epoxy resin	-	6.50%		
			3.07%	0.0217	Phenol Resin	-	5.50%		
			0.28%	0.0020	Carbon Black	1333-86-4	0.50%		
D/A Epoxy	0.16%	0.0011	0.14%	0.00097	Silver (Ag)	7440-22-4	86.09%	Die attach epoxy: Henkel (Ablebond) 2100A	
			0.01%	0.00007	2,2-dimethyl-1,3 Propanediyl Bismethacrylate	1985-51-9	5.92%		
			0.01%	0.00007	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	-	5.92%		
			0.003%	0.00002	2-[[2,2 bis[[[1-oxoallyloxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl diacrylate	94108-97-1	1.88%		
			0.0003%	0.000002	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.19%		
Wire	0.49%	0.0035	0.48%	0.0034	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball	
			0.01%	0.0001	Palladium	7440-05-3	1.50%		
Solder Balls	13.78%	0.0971	13.57%	0.0957	Tin (Sn)	7440-31-5	98.50%	SAC105	
			0.14%	0.0010	Silver (Ag)	7440-22-4	1.00%		
			0.07%	0.0005	Copper (Cu)	7440-50-8	0.50%		
Substrate	13.11%	0.0924	4.20%	0.0296	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A	
			8.91%	0.0628	Glass Fiber	65997-17-3	68.00%		
Foil	7.43%	0.0524	6.01%	0.0424	Copper	7440-50-8	80.89%		
			1.37%	0.0096	Nickel	7440-02-0	18.38%		
			0.05%	0.0004	Gold	7440-57-5	0.73%		
Solder Mask	8.15%	0.0575	4.58%	0.0323	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308	
			1.30%	0.0092	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%		
			1.79%	0.0126	Barium Sulfate	7727-43-7	22.00%		
			0.24%	0.0017	Talc (containing no asbestiform fibers)	14807-96-6	3.00%		
			0.23%	0.0016	Trade secret ingredients	-	2.80%		

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