



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com	Package: 256 ftBGA (option 3) Total Device Weight 0.803 Grams	Package Code: <div style="border: 1px solid black; padding: 2px; display: inline-block;">FTG256</div> Products: <div style="border: 1px solid black; padding: 2px; display: inline-block;">XO2</div>	Assembly: ASEM Size (mm): 17 x 17 Lead pitch (mm): 1.0 MSL: 3 Reflow max (°C): 260
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	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.39%	0.0112	1.39%	0.0112	Silicon chip	7440-21-3	100.00%	Die size: 4.41 x 4.36 mm
Mold Compound	54.23%	0.4353	3.80% 2.71% 2.71% 0.27% 44.74%	0.0305 0.0218 0.0218 0.0022 0.3591	Epoxy Resin Phenol Novolac Metal Hydroxide Carbon Black Silica Fused	- 9003-35-4 - 1333-86-4 60676-86-0	7.00% 5.00% 5.00% 0.50% 82.50%	Mold Compound: Sumitomo G750SE (ULA)
D/A Epoxy	0.20%	0.0016	0.16% 0.04%	0.00128 0.00032	Silver Esters & resins	7440-22-4 -	80.00% 20.00%	Die attach epoxy: Henkel (Ablebond) 2100A
Wire	0.19%	0.0015	0.187% 0.003%	0.00150 0.00002	Copper Palladium	7440-50-8 7440-05-3	98.50% 1.50%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	15.49%	0.1243	14.95% 0.46% 0.08%	0.1200 0.0037 0.0006	Tin (Sn) Silver (Ag) Copper (Cu)	7440-31-5 7440-22-4 7440-50-8	96.50% 3.00% 0.50%	SAC305
Substrate	13.02%	0.1045	8.85% 4.17%	0.0711 0.0334	Glass fiber BT Resins	65997-17-3 -	68.00% 32.00%	BT Resin CCL-HL832NX-A
Foil	9.50%	0.0762	8.09% 1.36% 0.05%	0.0649 0.0109 0.0004	Copper Nickel Gold	7440-50-8 7440-02-0 7440-57-5	85.15% 14.28% 0.57%	
Solder Mask	5.97%	0.0479	3.36% 0.96% 1.31% 0.18% 0.17%	0.0269 0.0077 0.0105 0.0014 0.0013	Quartz 3-methoxy-3-methylbutylacetate Barium Sulfate Talc (containing no asbestiform fibers) Trade secret ingredients	14808-60-7 103429-90-9 7727-43-7 14807-96-6 -	56.20% 16.00% 22.00% 3.00% 2.80%	Solder mask PSR4000 AUS 308

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Assembly: ASEK
Size (mm): 17 x 17
Lead pitch (mm): 1.0
MSL: 3
Reflow max (°C): 260

Package: 256 ftBGA (option 3)
Total Device Weight **0.803** Grams

Package Code:

FTG256

Products:

XO2

June, 2022

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.39%	0.0112	1.39%	0.0112	Silicon chip	7440-21-3	100.00%	Die size: 4.41 x 4.36 mm
Mold Compound	54.23%	0.4353	47.45%	0.3809	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KEG-2250LKDS (ULA)
			3.52%	0.0283	Epoxy resin	-	6.50%	
			2.98%	0.0239	Phenol Resin	-	5.50%	
			0.27%	0.0022	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.20%	0.0016	0.16%	0.00128	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00032	Esters & resins	-	20.00%	
Wire	0.19%	0.0015	0.19%	0.0015	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.00%	0.0000	Palladium	7440-05-3	1.50%	
Solder Balls	15.49%	0.1243	15.26%	0.1225	Tin (Sn)	7440-31-5	98.50%	SAC105
			0.15%	0.0012	Silver (Ag)	7440-22-4	1.00%	
			0.08%	0.0006	Copper (Cu)	7440-50-8	0.50%	
Substrate	13.02%	0.1045	8.85%	0.0711	Glass fiber	65997-17-3	68.00%	BT Resin CCL-HL832NX-A
			4.17%	0.0334	BT Resins	-	32.00%	
Foil	9.50%	0.0762	8.09%	0.0649	Copper	7440-50-8	85.15%	
			1.36%	0.0109	Nickel	7440-02-0	14.28%	
			0.05%	0.0004	Gold	7440-57-5	0.57%	
Solder Mask	5.97%	0.0479	3.36%	0.0269	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.96%	0.0077	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.31%	0.0105	Barium Sulfate	7727-43-7	22.00%	
			0.18%	0.0014	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.17%	0.0013	Trade secret ingredients	-	2.80%	

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