



Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@latticesemi.com

Package: 484 fpBGA
Total Device Weight 2.214 Grams

Package Code:

FG484

Assembly: ASEM

Size (mm): 23 x 23

Lead pitch (mm): 1.0

MSL: 3

Reflow max (°C): 250

June, 2025

Products:

XO2

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.992%	0.0219	0.99%	0.0219	Silicon chip	7440-21-3	100.00%	
Mold Compound	34.352%	0.7604	2.23%	0.0494	Epoxy Resin	-	6.50%	Mold Compound: Sumitomo G750SE
			1.72%	0.0380	Phenol Novolac	9003-35-4	5.00%	
			1.72%	0.0380	Metal Hydroxide	-	5.00%	
			0.10%	0.0023	Carbon Black	1333-86-4	0.30%	
			28.58%	0.6327	Silica Fused	60676-86-0	83.20%	
D/A Epoxy	0.144%	0.00319	0.1186%	0.00263	Silver (Ag)	7440-22-4	82.43%	Die attach epoxy: Henkel (Ablebond)ABL 2100A
			0.0082%	0.00018	2,2-dimethyl-1,3 Propanediyl Bismethacrylate	1985-51-9	5.67%	
			0.0082%	0.00018	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	-	5.67%	
			0.0082%	0.00018	2-[[2,2 bis[[1-(oxoallyloxy)methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl diacrylate	94108-97-1	5.67%	
			0.0008%	0.00002	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.57%	
Wire	0.225%	0.0050	0.218%	0.0048	Copper (Cu)	7440-50-8	97.20%	0.8 mil diameter; 1 wire per solder ball
			0.006%	0.0001	Palladium (Pd)	7440-05-3	2.50%	
			0.001%	0.00001	Gold (Au)	7440-57-5	0.30%	
Solder Balls	21.213%	0.4696	20.47%	0.4531	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.64%	0.0141	Silver (Ag)	7440-22-4	3.00%	
			0.11%	0.0023	Copper (Cu)	7440-50-8	0.50%	
Substrate	20.150%	0.4460	6.45%	0.1427	BT Resins	-	32.00%	BT Resin CCL-HLR32NX-A
			13.70%	0.3033	Glass fiber	65997-17-3	68.00%	
Foil	18.311%	0.4053	16.70%	0.3696	Copper	7440-50-8	91.18%	
			1.54%	0.0340	Nickel	7440-02-0	8.40%	
			0.08%	0.0017	Gold	7440-57-5	0.42%	
Solder Mask	4.613%	0.1021	2.03%	0.0450	Plastic PAK	Not Specified	44.10%	Solder mask PSR4000 AUS 308 Cured
			1.34%	0.0297	Barium Sulfate	7727-43-7	29.10%	
			0.90%	0.0200	Plastic EP	Not Specified	19.60%	
			0.14%	0.0031	Talc	14807-96-6	3.00%	
			0.07%	0.0015	Natural Ingredient	Trade Secret	1.50%	
			0.07%	0.0015	Additives	Trade Secret	1.50%	
			0.03%	0.0006	Pigment portion	Trade Secret	0.60%	
			0.03%	0.0006	Silicon dioxide	7631-86-9	0.60%	
	100.000%	2.214	100.000%	2.214				

Note:

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.

www.latticesemi.com





Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@latticesemi.com

Package: 484 fpBGA
Total Device Weight 2.214 Grams

Package Code:

FG484

Products:

XO2

Assembly: ASEK

Size (mm): 23 x 23

Lead pitch (mm): 1.0

MSL: 3

Reflow max (°C): 250

June, 2025

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.992%	0.0219	0.99%	0.0219	Silicon chip	7440-21-3	100.00%	
Mold Compound	34.352%	0.7604	1.72%	0.0380	Epoxy Resin	-	5.00%	Mold Compound: Hitachi CEL-9750ZHFI0AKL-U
			1.72%	0.0380	Phenol Resin	-	5.00%	
			0.07%	0.0015	Carbon Black	1333-86-4	0.20%	
			30.16%	0.6676	Silica	60676-86-0	87.80%	
			0.69%	0.0152	Others	-	2.00%	
D/A Epoxy	0.144%	0.0032	0.1239%	0.00274	Silver (Ag)	7440-22-4	86.09%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.0085%	0.00019	2,2-dimethyl-1,3 Propanediyl Bismethacrylate	1985-51-9	5.92%	
			0.0071%	0.00016	A mixture of: 4-allyl-2,6-bis(2,3-epoxypropyl)phenol	Trade Secret	4.92%	
			0.0014%	0.00003	Perfluoropolyoxyalkane ether	925918-64-5	1.00%	
			0.0027%	0.00006	2-[[[2,2 bis[[[(1-oxoallyloxy)methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl diacrylate	94108-97-1	1.88%	
			0.0003%	0.00001	bis(4-tert-butylcyclohexyl) peroxydicarbonate	15520-11-3	0.19%	
Wire	0.225%	0.0050	0.218%	0.0048	Copper (Cu)	7440-50-8	97.20%	0.8 mil diameter; 1 wire per solder ball
			0.006%	0.0001	Palladium (Pd)	7440-05-3	2.50%	
			0.001%	0.00001	Gold (Au)	7440-57-5	0.30%	
Solder Balls	21.213%	0.4696	20.471%	0.4531	Tin (Sn)	7440-31-5	96.50%	M30(Sn/3.5Ag)
			0.742%	0.0164	Silver (Ag)	7440-22-4	3.50%	
Substrate	20.150%	0.4460	6.45%	0.1427	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			13.70%	0.3033	Glass fiber	65997-17-3	68.00%	
Foil	18.311%	0.4053	16.70%	0.3696	Copper	7440-50-8	91.18%	
			1.54%	0.0340	Nickel plating	7440-02-0	8.40%	
			0.08%	0.0017	Gold plating	7440-57-5	0.42%	
Solder Mask	4.613%	0.1021	2.03%	0.0450	Plastic PAK	Not Specified	44.10%	Solder mask PSR4000 AUS 308 Cured
			1.34%	0.0297	Barium Sulfate	7727-43-7	29.10%	
			0.90%	0.0200	Plastic EP	Not Specified	19.60%	
			0.14%	0.0031	Talc	14807-96-6	3.00%	
			0.07%	0.0015	Natural Ingredient	Trade Secret	1.50%	
			0.07%	0.0015	Additives	Trade Secret	1.50%	
			0.03%	0.0006	Pigment portion	Trade Secret	0.60%	
			0.03%	0.0006	Silicon dioxide	7631-86-9	0.60%	
	100.000%	2.214	100.000%	2.214				

Note:

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.

www.latticesemi.com

