



Device Material Content

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

Package Code:

FN672

Assembly: ASEM

Size (mm): 23 x 23

Lead pitch (mm): 1.0

MSL: 3

Reflow max (°C): 250

Package: 672 fpBGA

Total Device Weight 3.174 Grams

Products:

FE2, FE3, XP2

June, 2022

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.33%	0.0422			Silicon chip	7440-21-3	100.00%	Die size: 8.79 x 8.31 mm
Mold Compound	36.81%	1.1686	2.58% 1.84% 1.84% 0.18% 30.37%	0.0818 0.0584 0.0584 0.0058 0.9641	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
D/A Epoxy	0.19%	0.0061	0.15% 0.04%	0.00490 0.00122	Silver Esters & resins	7440-22-4 -	80.00% 20.00%	Die attach epoxy: Henkel (Ablebond) 2100A
Wire	0.23%	0.0074	0.23% 0.00%	0.0073 0.0001	Copper Palladium	7440-50-8 7440-05-3	98.45% 1.55%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	20.54%	0.6520	19.82% 0.62% 0.10%	0.6292 0.0196 0.0033	Tin (Sn) Silver (Ag) Copper (Cu)	7440-31-5 7440-22-4 7440-50-8	96.50% 3.00% 0.50%	SAC305
Substrate	21.91%	0.6953	7.01% 14.90%	0.2225 0.4728	BT Resins Glass fiber	- 65997-17-3	32.00% 68.00%	BT Resin CCL-HL832NX-A
Foil	15.19%	0.4821	13.80% 1.31% 0.07%	0.4381 0.0417 0.0023	Copper Nickel plating Gold plating	7440-50-8 7440-02-0 7440-57-5	90.87% 8.64% 0.48%	
Solder Mask	3.80%	0.1206	2.13% 0.61% 0.84% 0.11% 0.11%	0.0678 0.0193 0.0265 0.0036 0.0034	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

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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Rev. L1



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FN672

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Mold Compound	36.81%	1.1686	1.84% 1.84% 0.07% 32.32% 0.74%	0.0584 0.0584 0.0023 1.0260 0.0234	Epoxy Resin Phenol Resin Carbon Black Silica Others	- - 1333-86-4 60676-86-0 -	5.00% 5.00% 0.20% 87.80% 2.00%	Mold Compound: Hitachi CEL9750ZHF10AKL-U (ULA)
D/A Epoxy	0.19%	0.0061	0.15% 0.04%	0.00490 0.00122	Silver Esters & resins	7440-22-4 -	80.00% 20.00%	Die attach epoxy: Henkel (Ablebond) 2100A
Wire	0.23%	0.0074	0.23% 0.00%	0.0073 0.0001	Copper Palladium	7440-50-8 7440-05-3	98.45% 1.55%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	20.54%	0.6520	19.82% 0.72%	0.6292 0.0228	Tin (Sn) Silver (Ag)	7440-31-5 7440-22-4	96.50% 3.50%	Ag 3.5
Substrate	21.91%	0.6953	7.01% 14.90%	0.2225 0.4728	BT Resins Glass fiber	- 65997-17-3	32.00% 68.00%	BT Resin CCL-HL832NX-A
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