



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Package Code: CB132		Assembly: ASEM Size (mm): 8 x 8 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260	
June, 2022	Package: 132 csBGA		Total Device Weight 0.1061 Grams		Products: ICE40HX			
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.33%	0.0014	1.33%	0.0014	Silicon chip	7440-21-3	100.00%	Die size: 1.5 x 1.5 mm
Mold Compound	58.18%	0.0617	50.91% 3.78% 3.20% 0.29%	0.0540 0.0040 0.0034 0.0003	Silica Epoxy resin Phenol Resin Carbon Black	60676-86-0 - - 1333-86-4	87.50% 6.50% 5.50% 0.50%	Mold Compound: Kyocera KE-G1250LKDS
D/A Tape	0.22%	0.0002	0.03% 0.03% 0.01% 0.14%	0.00004 0.00004 0.00001 0.00015	Epoxy Resin Phenol Resin SiO2 Filler (Meta)Acrylic Copolymer	- - 99439-28-8 -	15.00% 15.00% 5.00% 65.00%	Die attach tape: Hitachi FH-900 HR-9004 series
Wire	0.83%	0.0009	0.82% 0.01%	0.00087 0.00001	Copper Palladium	7440-50-8 7440-05-3	98.50% 1.50%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	13.09%	0.0139	12.89% 0.13% 0.07%	0.0137 0.0001 0.0001	Tin (Sn) Silver (Ag) Copper (Cu)	7440-31-5 7440-22-4 7440-50-8	98.50% 1.00% 0.50%	SAC105
Substrate	13.41%	0.0142	9.12% 4.29%	0.0097 0.0046	Glass fiber BT Resins	65997-17-3 -	68.00% 32.00%	BT Resin CCL-HL832NX-A
Foil	8.91%	0.0095	8.49% 0.19% 0.19%	0.0090 0.0002 0.0002	Copper Nickel plating Gold plating	7440-50-8 7440-02-0 7440-57-5	95.31% 2.12% 2.12%	
Solder Mask	4.03%	0.0043	2.26% 0.64% 0.89% 0.12% 0.02% 0.09%	0.00240 0.00068 0.00094 0.00013 0.00002 0.00010	Quartz 3-methoxy-3-methylbutylacetate Barium Sulfate Talc Naphthalene Trade secret ingredients	14808-60-7 103429-90-9 7727-43-7 14807-96-6 91-20-3 -	56.20% 16.00% 22.00% 3.00% 0.50% 2.30%	Solder mask PSR4000 AUS 308

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