



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com		Package: 81 csBGA Total Device Weight 0.040 Grams			Package Code: CB81	Assembly: ASEM Size (mm): 5 x 5 Lead pitch (mm): 0.5 MSL: 3 Reflow max (°C): 260		
June, 2022					Products: ICE40LP			
	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	9.05%	0.0036	9.05%	0.0036	Silicon chip	7440-21-3	100.00%	Die size: 1.50 x 1.50mm
Mold Compound	58.98%	0.0236	51.61% 3.83% 3.24% 0.29%	0.0206 0.0015 0.0013 0.0001	Silica Epoxy resin Phenol Resin Carbon Black	60676-86-0 - - 1333-86-4	87.50% 6.50% 5.50% 0.50%	Mold Compound: KEG1250 LKDS
D/A Tape	0.44%	0.00018	0.07% 0.07% 0.02% 0.29%	0.000026 0.000026 0.000009 0.000114	Epoxy Resin Phenol Resin SiO2 Filler (Meta)Acrylic Copolymer	- - 99439-28-8 -	15.00% 15.00% 5.00% 65.00%	TAPE FH-900T-25_HR9004
Wire	1.42%	0.00057	1.41% 0.01%	0.00056 0.00001	Copper Palladium	7440-50-8 7440-05-3	99.00% 1.00%	0.7 MIL Pd COATED Cu
Solder Balls	1.74%	0.00070	1.72% 0.02% 0.01%	0.000687 0.000007 0.000003	Tin (Sn) Silver (Ag) Copper (Cu)	7440-31-5 7440-22-4 7440-50-8	98.50% 1.00% 0.50%	SAC105
Substrate	16.73%	0.0067	5.35% 11.38%	0.0021 0.0045	BT Resins Glass fiber	- 65997-17-3	32.00% 68.00%	BT Resin CCL-HL832NX-A
Foil	7.61%	0.0030	6.24% 1.15% 0.22%	0.00249 0.00046 0.00009	Copper Nickel plating Gold plating	7440-50-8 7440-02-0 7440-57-5	82.00% 15.10% 2.91%	
Solder Mask	4.02%	0.0016	2.26% 0.64% 0.88% 0.12% 0.11%	0.00090 0.00026 0.00035 0.00005 0.00004	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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