



Device Material Content

5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com					Package Code: BG121			Assembly: ASEK Size (mm): 9 x 9 Lead pitch (mm): 0.8 MSL: 3 Reflow max (°C): 260	
Package: 121 caBGA Total Device Weight 0.257 Grams					Products: ICE40HX				
June, 2022	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:	
Die	0.60%	0.0015	0.60%	0.0015	Silicon chip	7440-21-3	100.00%	Die size: 2.7 x 2.4 mm	
Mold Compound	71.51%	0.1835	62.57% 4.65% 3.93% 0.36%	0.1606 0.0119 0.0101 0.0009	Silica Epoxy resin Phenol Resin Carbon Black	60676-86-0 - - 1333-86-4	87.50% 6.50% 5.50% 0.50%	Mold Compound: KE-G1250AAS (ULA)	
Die Attach	0.44%	0.0011	0.28% 0.11% 0.01% 0.01% 0.01% 0.01% 0.01%	0.00073 0.00028 0.00002 0.00002 0.00002 0.00002 0.00002	Butadiene, acrylonitrile polymer Formaldehyde, polymer Dapsone Siloxanes and Silicones [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 1,3-Butadiene, acrylonitrile copolymer Bisphenol-A-(epichlorhydrin)	68610-41-3 37382-79-9 80-08-0 67762-90-7 2530-83-8 68891-46-3 25068-38-6	65.00% 25.00% 2.00% 2.00% 2.00% 2.00% 2.00%	Die attach: ATB-125	
Wire	0.18%	0.0005	0.17% 0.01% 0.00%	0.000446 0.000014 0.000002	Copper Palladium Gold	7440-50-8 7440-05-3 7440-57-5	96.55% 3.10% 0.35%	CuPdAu+	
Solder Balls	9.26%	0.0238	9.09% 0.10% 0.03% 0.03%	0.0233 0.0003 0.0001 0.0001	Tin (Sn) Silver (Ag) Copper (Cu) Nickel (Ni)	7440-31-5 7440-22-4 7440-50-8 7440-02-0	98.25% 1.10% 0.30% 0.35%	98.25Sn/1.2Ag/0.5Cu/0.05Ni	
Substrate	6.66%	0.0171	2.13% 4.53%	0.0055 0.0116	BT Resins Glass fiber	- 65997-17-3	32.00% 68.00%	BT Resin CCL-HL832NX-A	
Foil	8.83%	0.0227	6.53% 1.94% 0.35%	0.0168 0.0050 0.0009	Copper Nickel Gold	7440-50-8 7440-02-0 7440-57-5	74.00% 22.00% 4.00%		
Solder Mask	2.52%	0.0065	1.41% 0.40% 0.55% 0.08% 0.07%	0.0036 0.0010 0.0014 0.00019 0.00018	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 subcontract 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



PCN#09A-19

Rev. F2