



## Device Material Content

5555 NE Moore Ct.  
Hillsboro OR 97124  
[custreq@latticesemi.com](mailto:custreq@latticesemi.com)

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**Package:** 225 ucBGA  
**Total Device Weight** 0.080 Grams

**Package Code:**

CM225

**Products:**

ICE40LP/HX

Assembly: ASEM

Size (mm): 7 x 7

Lead pitch (mm): 0.4

MSL: 3

Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
<b>Die</b>	4.63%	0.0037	4.63%	0.0037	Silicon chip	7440-21-3	100.00%	Die size: 3.35 x 3.07 mm
<b>Mold Compound</b>	60.18%	0.0482	52.66%	0.0422	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KEG1250 LKDS
			3.91%	0.0031	Epoxy resin	-	6.50%	
			3.31%	0.0027	Phenol Resin	-	5.50%	
			0.30%	0.00024	Carbon Black	1333-86-4	0.50%	
<b>Die attach</b>	0.67%	0.00054	0.54%	0.000431	Silver	7440-22-4	80.00%	Ablebond 2100A
			0.13%	0.000108	Esters & resins	-	20.00%	
<b>Wire</b>	1.18%	0.0009	1.14%	0.00092	Copper	7440-50-8	97.30%	0.7 mil diameter; 1 wire per solder ball
			0.03%	0.00003	Palladium	7440-05-3	2.70%	
<b>Solder Balls</b>	2.41%	0.00194	2.38%	0.00191	Tin (Sn)	7440-31-5	98.50%	SAC105
			0.02%	0.00002	Silver (Ag)	7440-22-4	1.00%	
			0.01%	0.00001	Copper (Cu)	7440-50-8	0.50%	
<b>Substrate</b>	14.73%	0.0118	4.71%	0.0038	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			10.01%	0.0080	Glass fiber	65997-17-3	68.00%	
<b>Foil</b>	11.78%	0.0094	9.66%	0.0077	Copper	7440-50-8	82.00%	
			1.78%	0.0014	Nickel plating	7440-02-0	15.10%	
			0.34%	0.0003	Gold plating	7440-57-5	2.91%	
<b>Solder Mask</b>	4.42%	0.0035	2.48%	0.00199	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.71%	0.00057	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			0.97%	0.00078	Barium Sulfate	7727-43-7	22.00%	
			0.13%	0.00011	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.02%	0.00002	Naphthalene	91-20-3	0.50%	
			0.10%	0.00008	Trade secret ingredients	-	2.30%	

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