Device Material Content

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Package: **256 caBGA**
Total Device Weight **0.425** **Grams**

Package Code: CT256
Products: ICE40HX

Assembly: ASEM
Size (mm): 14 x 14
Lead pitch (mm): 0.8
MSL: 3
Reflow max (ºC): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	0.88%	0.0037	0.88%	0.0037	Silicon chip	7440-21-3	100.00%	Die size: 2.69 x 2.41 mm
Mold Compound	61.36%	0.2608	53.69%	0.2282	Silica	60676-86-0	87.50%	Mold Compound: Kyocera KE-G1250LKDS
			3.99%	0.0170	Epoxy resin	-	6.50%	
			3.37%	0.0143	Phenol Resin	-	5.50%	
			0.31%	0.0013	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.04%	0.0002	0.01%	0.00003	Epoxy Resin	-	15.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.01%	0.00003	Phenol Resin	-	15.00%	
			0.00%	0.00001	SiO2 Filler	99439-28-8	5.00%	
			0.03%	0.00011	(Meta)Acrylic Copolymer	-	65.00%	
Wire	0.37%	0.0016	0.36%	0.00155	Copper	7440-50-8	98.00%	0.7 mil diameter; 1 wire per solder ball
			0.01%	0.00003	Palladium	7440-05-3	2.00%	
Solder Balls	16.50%	0.0701	15.92%	0.0677	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.50%	0.0021	Silver (Ag)	7440-22-4	3.00%	
			0.08%	0.0004	Copper (Cu)	7440-50-8	0.50%	
Substrate	9.53%	0.0405	3.05%	0.0130	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			6.48%	0.0275	Glass fiber	65997-17-3	68.00%	
Foil	5.36%	0.0228	4.33%	0.0184	Copper	7440-50-8	80.75%	
			0.99%	0.0042	Nickel	7440-02-0	18.51%	
			0.04%	0.0002	Gold	7440-57-5	0.74%	
Solder Mask	5.95%	0.0253	3.35%	0.0142	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.95%	0.0040	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.31%	0.0056	Barium Sulfate	7727-43-7	22.00%	
			0.18%	0.0008	Talc (containing no asbestiform fibers)	14807-96-6	3.00%	
			0.17%	0.0007	Trade secret ingredients	-	2.80%	

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Br/Cl/Sb
Pb lead-free
RoHS

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