



## Device Material Content

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**Package Code:**

UMN132

Assembly: ASEM

Size (mm): 6 x 6

Lead pitch (mm): 0.4

MSL: 3

Reflow max (°C): 260

**Package:** 132 ucBGA

**Total Device Weight** 0.067 Grams

**Products:**

LC4kZE

April, 2018

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
<b>Die</b>	3.27%	0.0022	3.27%	0.0022	Silicon chip	7440-21-3	100.00%	Die size: 1.77 x 1.91 mm
<b>Mold Compound</b>	51.45%	0.0345	3.60%	0.0024	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE
			2.57%	0.0017	Phenol Novolac	9003-35-4	5.00%	
			2.57%	0.0017	Metal Hydroxide	-	5.00%	
			0.26%	0.0002	Carbon Black	1333-86-4	0.50%	
			42.44%	0.0284	Silica Fused	60676-86-0	82.50%	
<b>D/A Epoxy</b>	0.53%	0.0004	0.42%	0.00028	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.11%	0.00007	Esters & resins	-	20.00%	
<b>Wire</b>	1.76%	0.0012	1.74%	0.0012	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.03%	0.0000	Palladium	7440-05-3	1.50%	
<b>Solder Balls</b>	12.37%	0.0083	11.94%	0.0080	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.37%	0.0002	Silver (Ag)	7440-22-4	3.00%	
			0.06%	0.0000	Copper (Cu)	7440-50-8	0.50%	
<b>Substrate</b>	30.62%	0.0205	19.01%	0.0127	Laminate*	-	62.08%	BT Resin CCL-HL832NX-A
			5.22%	0.0035	Solder mask PSR4000 AUS 308	-	17.06%	
			4.53%	0.0030	Copper	7440-50-8	14.79%	
			1.59%	0.0011	Nickel plating	7440-02-0	5.18%	
			0.27%	0.0002	Gold plating	7440-57-5	0.89%	

**Notes:** \* 0.19% max. concentration of Bisphenol A (CAS# 80-05-7) in substrate laminate material as impurity - not intentionally added.

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.

Constituent substances and proportions in epoxy materials are before curing.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

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