Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@latticesemi.com

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Package: 484 fpBGA
Total Device Weight 2.21 **Grams**

Package Code: FN484
Products: LAE3

Assembly: ASEM
Size (mm): 23 x 23
Lead pitch (mm): 1.0
MSL: 3
Reflow max (ºC): 250

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	3.58%	0.0791	3.58%	0.0791	Silicon chip	7440-21-3	100.00%	Die size: 9.63 x 11.36 mm
Mold Compound	25.07%	0.5540	1.25%	0.0277	Epoxy Resin	-	5.00%	Mold Compound: Hitachi CEL9750ZHF10AKL-U B1(LSA)
			1.25%	0.0277	Phenol Resin	-	5.00%	
			0.05%	0.0011	Carbon Black	1333-86-4	0.20%	
			22.01%	0.4865	Silica	60676-86-0	87.80%	
			0.50%	0.0111	Others	-	2.00%	
D/A Epoxy	0.50%	0.0111	0.40%	0.00884	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.10%	0.00221	Esters & resins	-	20.00%	
Wire	0.64%	0.0141	0.64%	0.0141	Gold (Au)	7440-57-5	100.00%	0.8 mil diameter; 1 wire per solder ball
Solder Balls	21.30%	0.4707	20.55%	0.4543	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.64%	0.0141	Silver (Ag)	7440-22-4	3.00%	
			0.11%	0.0024	Copper (Cu)	7440-50-8	0.50%	
Substrate	28.86%	0.6377	8.02%	0.1773	BT Resins	-	27.80%	BT Resin CCL-HL832EX*
			1.21%	0.0268	Bromine (Br)	10097-32-2	4.20%	
			19.62%	0.4337	Glass fiber	65997-17-3	68.00%	
Foil	13.12%	0.2900	10.76%	0.2378	Copper	7440-50-8	82.00%	
			1.98%	0.0438	Nickel plating	7440-02-0	15.10%	
			0.38%	0.0084	Gold plating	7440-57-5	2.91%	
Solder Mask	6.93%	0.1532	3.77%	0.0833	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.51%	0.0112	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.23%	0.0051	Morpholine derivative	71868-10-5	3.32%	
			0.21%	0.0046	Silicon dioxide	7631-86-9	3.00%	
			0.21%	0.0046	Silica, amorphous	112945-52-5	3.00%	
			0.02%	0.0004	Carbon black	1333-86-4	0.24%	
			1.99%	0.0440	Trade secret ingredients	-	28.74%	

Notes: * 0.29% max. concentration (of total pkg wt.) of Bisphenol A (CAS# 80-05-7), contained 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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