



Device Material Content

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

Assembly: ASEM
Size (mm): 17 x 17

Package: 400 caBGA
Total Device Weight 0.747 Grams

Package Code:

BG400

Lead pitch (mm): 0.8

MSL: 3

Reflow max (°C): 260

July, 2019

Products:

XO3

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.39%	0.0104	1.39%	0.0104	Silicon chip	7440-21-3	100.00%	Die size: 4.4 x 4.3 mm
Mold Compound	51.80%	0.3871	3.63%	0.0271	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			2.59%	0.0194	Phenol Novolac	9003-35-4	5.00%	
			2.59%	0.0194	Metal Hydroxide	-	5.00%	
			0.26%	0.0019	Carbon Black	1333-86-4	0.50%	
			42.74%	0.3194	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.21%	0.0016	0.17%	0.00126	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00031	Esters & resins	-	20.00%	
Wire	0.72%	0.0054	0.70%	0.0053	Copper	7440-50-8	97.90%	0.8 mil diameter; 1 wire per solder ball
			0.02%	0.0001	Palladium	7440-05-3	2.10%	
Solder Balls	20.03%	0.1497	19.33%	0.1444	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.60%	0.0045	Silver (Ag)	7440-22-4	3.00%	
			0.10%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	16.80%	0.1256	0.00%	0.0000	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			0.00%	0.0000	Glass fiber	65997-17-3	68.00%	
Foil	6.28%	0.0469	5.31%	0.0397	Copper	7440-50-8	84.56%	
			0.92%	0.0069	Nickel plating	7440-02-0	14.70%	
			0.05%	0.0003	Gold plating	7440-57-5	0.74%	
Solder Mask	2.77%	0.0207	1.51%	0.0112	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.20%	0.0015	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.09%	0.0007	Morpholine derivative	71868-10-5	3.32%	
			0.08%	0.0006	Silicon dioxide	7631-86-9	3.00%	
			0.08%	0.0006	Silica, amorphous	112945-52-5	3.00%	
			0.01%	0.00005	Carbon black	1333-86-4	0.24%	
			0.80%	0.0059	Trade secret ingredients	-	28.74%	

Notes: * 0.17% 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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