



Device Material Content

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Assembly: ASEM
Size (mm): 35 x 35

Package Code:

FN1152

Lead pitch (mm): 1.0

MSL: 3

Reflow max (°C): 250

Package: 1152 fpBGA

Total Device Weight 5.50 Grams

Products:

FE2

July, 2020

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	4.04%	0.2222	4.04%	0.2222	Silicon chip	7440-21-3	100.00%	Die size: 5.66 x 6.71mm
Mold Compound	34.46%	1.8951	2.41%	0.1327	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE
			1.72%	0.0948	Phenol Novolac	9003-35-4	5.00%	
			1.72%	0.0948	Metal Hydroxide	-	5.00%	
			0.17%	0.0095	Carbon Black	1333-86-4	0.50%	
			28.43%	1.5634	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.57%	0.0314	0.46%	0.02508	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.11%	0.00627	Esters & resins	-	20.00%	
Wire	0.18%	0.0100	0.18%	0.0098	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.00%	0.0001	Palladium	7440-05-3	1.50%	
Solder Balls	20.33%	1.1181	19.62%	1.0790	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.61%	0.0335	Silver (Ag)	7440-22-4	3.00%	
			0.10%	0.0056	Copper (Cu)	7440-50-8	0.50%	
Substrate	21.65%	1.1909	6.71%	0.3692	BT Resins	-	31.00%	BT Resin CCL-HL832NX-A*
			14.72%	0.8098	Glass fiber	65997-17-3	68.00%	
			0.22%	0.0119	Bisphenol A	80-05-7	1.00%	
Foil	14.44%	0.7941	13.64%	0.7503	Copper	7440-50-8	94.48%	
			0.72%	0.0398	Nickel plating	7440-02-0	5.01%	
			0.07%	0.0040	Gold plating	7440-57-5	0.50%	
Solder Mask	4.33%	0.2381	2.43%	0.1338	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.69%	0.0381	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			0.95%	0.0524	Barium Sulfate	7727-43-7	22.00%	
			0.13%	0.0071	Talc	14807-96-6	3.00%	
			0.02%	0.0012	Naphthalene	91-20-3	0.50%	
			0.10%	0.0055	Trade secret ingredients	-	2.30%	

Notes: SVHC: * 0.22% max. concentration of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.

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