



Device Material Content

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Assembly: ATP
Size (mm): 17 x 17

Package Code:

BG400

Lead pitch (mm): 0.8

Package: 400 caBGA
Total Device Weight 0.739 Grams

Products:

LCMXO3-9400

MSL: 3

January, 2020

Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.85%	0.0137			Silicon chip	7440-21-3	100.00%	Die size: 5.1 x 4.9 x 0.228 mm
Mold Compound	51.97%	0.3842	3.64%	0.0269	Solid Epoxy Resin	-	7.00%	Mold Compound: Hitachi GE-110LS-V
			2.60%	0.0192	Phenol Resin	-	5.00%	
			44.17%	0.3266	Silica	60676-86-0	85.00%	
			1.30%	0.0096	Metal Hydroxide	-	2.50%	
			0.26%	0.0019	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.26%	0.0019	0.22%	0.00165	Silver	7440-22-4	87.00%	Die attach epoxy: Henkel QMI-529HT
			0.02%	0.00013	Isobornyl Methacrylate	7534-94-3	7.00%	
			0.001%	0.00001	2-(3,4-Epoxy)cyclohexyl)ethyltrimethoxysilane	3388-04-3	0.50%	
			0.01%	0.00010	Additive	-	5.00%	
Wire	0.80%	0.0059	0.78%	0.0058	Copper (Cu)	7440-50-8	97.90%	MKE Cu wire(Pd coated), 0.02mm dia
			0.02%	0.0001	Palladium (Pd)	7440-05-3	2.10%	
Solder Balls	18.95%	0.1401	18.29%	0.1352	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.57%	0.0042	Silver (Ag)	7440-22-4	3.00%	
			0.09%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	16.42%	0.1213	5.25%	0.0388	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			11.16%	0.0825	Glass fiber	65997-17-3	68.00%	
Foil	5.83%	0.0431	4.51%	0.0334	Copper	7440-50-8	77.39%	
			1.11%	0.0082	Nickel plating	7440-02-0	19.02%	
			0.21%	0.0015	Gold plating	7440-57-5	3.59%	
Solder Mask	3.91%	0.0289	2.13%	0.0157	Quartz	14808-60-7	54.37%	Solder mask PSR4000 AUS 308
			0.29%	0.0021	Dipropylene glycol monomethyl ether	34590-94-8	7.33%	
			0.13%	0.0010	Morpholine derivative**	71868-10-5	3.32%	
			0.12%	0.0009	Silicon dioxide	7631-86-9	3.00%	
			0.12%	0.0009	Silica, amorphous	112945-52-5	3.00%	
			0.01%	0.0001	Carbon black	1333-86-4	0.24%	
			1.12%	0.0083	Trade secret ingredients	-	28.74%	

Notes: SVHC: * 0.12% max. concentration of Bisphenol A (CAS# 80-05-7), contained in substrate laminate material as impurity - not intentionally added.
** 0.13% max. concentration of Morpholine derivative (CAS# 71868-10-5), contained in solder mask material.

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