



Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
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November, 2020

Package: 256 caBGA
Total Device Weight 0.634 Grams

Package Code:
BG256

Products:
XO3L/LF-9400

Assembly: ASEK
Size (mm): 14 x 14
Lead pitch (mm): 0.8
MSL: 3
Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.89%	0.0120	1.89%	0.0120	Silicon chip	7440-21-3	100.00%	Die size: 3.53 x 4.17 mm
Mold Compound	52.42%	0.3323	45.87%	0.2908	Silica	60676-86-0	87.50%	Kyocera KE-G1250AHT (ULA)
			3.41%	0.0216	Epoxy resin	-	6.50%	
			2.88%	0.0183	Phenol Resin	-	5.50%	
			0.26%	0.0017	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.68%	0.0043	0.54%	0.00345	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.14%	0.00086	Epoxy Resin	-	20.00%	
Wire	0.28%	0.0018	0.27%	0.00169	Copper	7440-50-8	96.55%	CuPdAu+
			0.01%	0.00005	Palladium	7440-05-3	3.10%	
			0.00%	0.00001	Gold	7440-57-5	0.35%	
Solder Balls	22.12%	0.1402	21.35%	0.1353	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.66%	0.0042	Silver (Ag)	7440-22-4	3.00%	
			0.11%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	16.39%	0.1039	5.24%	0.0332	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			11.15%	0.0707	Glass fiber	65997-17-3	68.00%	
Foil	2.03%	0.0129	1.59%	0.0101	Copper	7440-50-8	78.16%	
			0.37%	0.0024	Nickel plating	7440-02-0	18.31%	
			0.07%	0.0005	Gold plating	7440-57-5	3.53%	
Solder Mask	4.18%	0.0265	0.98%	0.00623	Solvent naphtha (petroleum)	64742-94-5	23.52%	Solder mask PSR4000 AUS 320
			0.25%	0.00156	Naphthalene	91-20-3	5.87%	
			0.61%	0.00390	Phosphin oxide derivative	-	14.70%	
			0.61%	0.00390	Talc	14807-96-6	14.70%	
			0.74%	0.00467	Dipropylene glycol monomethyl Ether	34590-94-8	17.63%	
			0.61%	0.00390	Epoxy Resin	85954-11-6	14.70%	
			0.37%	0.00235	Barium Sulfate	7727-43-7	8.88%	

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Package: 256 caBGA
Total Device Weight 0.497 Grams

Package Code:

BG256

Products:

XO3L/LF-9400

Assembly: ATP

Size (mm): 14 x 14

Lead pitch (mm): 0.8

MSL: 3

Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	2.75%	0.0137			Silicon chip	7440-21-3	100.00%	Die size: 5.1 x 4.9 x 0.228 mm
Mold Compound	51.66%	0.2566	3.62%	0.0180	Solid Epoxy Resin	-	7.00%	Mold Compound: Hitachi GE-110LS-V
			2.58%	0.0128	Phenol Resin	-	5.00%	
			43.91%	0.2181	Silica	60676-86-0	85.00%	
			1.29%	0.0064	Metal Hydroxide	-	2.50%	
			0.26%	0.0013	Carbon Black	1333-86-4	0.50%	
D/A Epoxy	0.38%	0.0019	0.33%	0.00165	Silver	7440-22-4	87.00%	Die attach epoxy: Henkel QMI-529HT
			0.03%	0.00013	Isobornyl Methacrylate	7534-94-3	7.00%	
			0.002%	0.00001	2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	3388-04-3	0.50%	
			0.02%	0.00010	Additive	-	5.00%	
Wire	0.60%	0.0030	0.59%	0.0029	Copper (Cu)	7440-50-8	97.90%	MKE Cu wire(Pd coated), 0.02mm dia
			0.01%	0.0001	Palladium (Pd)	7440-05-3	2.10%	
Solder Balls	18.05%	0.0897	17.42%	0.0866	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.54%	0.0027	Silver (Ag)	7440-22-4	3.00%	
			0.09%	0.0004	Copper (Cu)	7440-50-8	0.50%	
Substrate	16.70%	0.0830	5.34%	0.0266	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A*
			11.35%	0.0564	Glass fiber	65997-17-3	68.00%	
Foil	5.87%	0.0292	4.59%	0.0228	Copper	7440-50-8	78.16%	
			1.07%	0.0053	Nickel plating	7440-02-0	18.31%	
			0.21%	0.0010	Gold plating	7440-57-5	3.53%	
Solder Mask	3.98%	0.0198	2.24%	0.0111	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.64%	0.0032	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			0.88%	0.0044	Barium Sulfate	7727-43-7	22.00%	
			0.12%	0.0006	Talc	14807-96-6	3.00%	
			0.02%	0.0001	Naphthalene	91-20-3	0.50%	
			0.09%	0.00045	Trade secret ingredients	-	2.30%	

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