

**LTM8023-BGA 50LD 11.25mm X 9mm X 3.42 mm Solder (DA) (TABLE OF MATERIAL DECLARATION)**

*The LTM8023 is RoHS compliant per EU RoHS Directive 2003/95/EC.*

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

No.	Part Name	Material Name	Component Weight (gram)	Materials Analysis (element)	CAS Number	Material Mass (gram)	Materials Analysis (weight %)
1	Substrate	Circuit Board	0.0859	Barium Compounds	7727-43-7	0.00129	1.50
				Filler Substances (Silica Crystalline)	73776-74-4 7631-86-9	0.03429	39.91
				Copper Metal	7440-50-8	0.04810	56.00
				Copper Compounds	1328-53-6	0.00002	0.02
				Ecotoxic substances	7439-92-1	0.00000	0.00
				Gold metal or alloy	7440-57-5	0.00040	0.46
				Nickel	7440-02-0	0.00180	2.10
				Zinc	7440-66-6	0.00001	0.01
2	Solder Paste	Alloy	0.0059	Sn	7440-31-5	0.00561	95.00
				Sb	7440-36-0	0.00030	5.00
4	Passive/Active Components		0.4710	Iron Powder (Fe)	7439-89-6	0.3505	74.41
				Copper (Cu)	7440-50-8	0.0936	19.87
				Nickel (Ni)	7440-02-0	0.0032	0.69
				Tin (Sn)	7440-31-5	0.0035	0.75
				Ceramic (Ba) Compounds	12047-27-7	0.02010	4.27
5	Active lcs	Silicon	0.0025	Silicon	7440-21-3	0.00251	100.00
6	solder ball		0.0840	Sn	7440-31-5	0.08106	96.50
				Ag	7440-22-4	0.00252	3.00
				Cu	7440-50-8	0.00042	0.50
7	Wire	Gold	0.0006	Au	7440-57-5	0.00060	99.99
8	Encapsulation	Epoxy Resin	0.3369	Fused Silica	60676-86-0	0.26009	77.20
				Epoxy Resin	non-disclosure	0.02998	8.90
				Phenol Resin	non-disclosure	0.02998	8.90
				Crytalline Silica	14808-60-7	0.01011	3.00
				Carbon Black	1333-86-4	0.00168	0.50
				Metal Hydroxide	non-disclosure	0.00505	1.50

Total Package Weight	0.9869	
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Note:      Composition derived from MSDS and material C of C from Vendors  
             Component Weight based on assembly of generic parts

**LTM8023-BGA 50LD 11.25mm X 9mm X 3.42 mm Epoxy (DA) (TABLE OF MATERIAL DECLARATION)**

*The LTM8023 is RoHS compliant per EU RoHS Directive 2003/95/EC.*

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

No.	Part Name	Material Name	Component Weight (gram)	Materials Analysis (element)	CAS Number	Material Mass (gram)	Materials Analysis (weight %)
1	Substrate	Circuit Board	0.0859	Barium Compounds	7727-43-7	0.00129	1.50
				Filler Substances (Silica Crystalline)	73776-74-4 7631-86-9	0.03429	39.91
				Copper Metal	7440-50-8	0.04810	56.00
				Copper Compounds	1328-53-6	0.00002	0.02
				Ecotoxic substances	7439-92-1	0.00000	0.00
				Gold metal or alloy	7440-57-5	0.00040	0.46
				Nickel	7440-02-0	0.00180	2.10
				Zinc	7440-66-6	0.00001	0.01
2	Solder Paste	Alloy	0.0059	Sn	7440-31-5	0.00561	95.00
				Sb	7440-36-0	0.00030	5.00
3	Die Attach Epoxy		0.0121	Di-ester resin	non-disclosure	0.00121	10.00
				Functionalized ester	non-disclosure	0.00121	10.00
				Silver	7440-22-4	0.00968	80.00
4	Passive/Active Components		0.4710	Iron Powder (Fe)	7439-89-6	0.3505	74.41
				Copper (Cu)	7440-50-8	0.0936	19.87
				Nickel (Ni)	7440-02-0	0.0032	0.69
				Tin (Sn)	7440-31-5	0.0035	0.75
				Ceramic (Ba) Compounds	12047-27-7	0.02010	4.27
5	Active lcs	Silicon	0.0025	Silicon	7440-21-3	0.00251	100.00
6	solder ball		0.0840	Sn	7440-31-5	0.08106	96.50
				Ag	7440-22-4	0.00252	3.00
				Cu	7440-50-8	0.00042	0.50
7	Wire	Gold	0.0006	Au	7440-57-5	0.00060	99.99
8	Encapsulation	Epoxy Resin	0.3369	Fused Silica	60676-86-0	0.26009	77.20
				Epoxy Resin	non-disclosure	0.02998	8.90
				Phenol Resin	non-disclosure	0.02998	8.90

				Crytalline Silica	14808-60-7	0.01011	3.00
				Carbon Black	1333-86-4	0.00168	0.50
				Metal Hydroxide	non-disclosure	0.00505	1.50
Total Package Weight			0.9990				

Note:      Composition derived from MSDS and material C of C from Vendors  
             Component Weight based on assembly of generic parts