

LTM4639-BGA-PBF 133LD 15mm X 15mm X 4.92mm (TABLE OF MATERIAL DECLARATION)

The LTM4639 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	0.2255	Barium Compounds	7727-43-7	0.00665	2.95
				Bismaleimide/Triazine Resin/Filler Substances (Silica Crystalline)	105391-33-1 1156-51-0/9003-36-5/21645-51-2	0.05856	25.97
				Copper Metal	*non-disclosure 7440-50-8	0.09566	42.42
				Copper Compounds	147-14-8	0.00006	0.03
				**Ecotoxic substances	7440-38-2	0.00001	0.00
				Gold metal or alloy	7440-28-0	0.00038	0.17
				Nickel	7440-57-5	0.00302	1.34
				Zinc	7440-02-0	0.00007	0.03
				Continuous Filament Fiber Glass	7440-66-6	0.04602	20.41
				Acrylic Resin	65997-17-3	*non-disclosure 0.01267	5.62
				Epoxy Resin	*non-disclosure	0.00016	0.07
				Chromium(III) oxide	1308-38-9	0.00000	0.00
				Silica amorphous	7631-86-9	0.00029	0.13
				Talc;not containing fibers like asbestos	14807-96-6	0.00077	0.34
				Aromatic carbonyl compounds	non-disclosure	0.00072	0.32
				Cyanoguanidine	461-58-5	0.00002	0.01
				Calcium caobonate	471-34-1	0.00003	0.01
				Amine compounds	*non-disclosure	0.00010	0.05
				Leveling agent and others	*non-disclosure	0.00029	0.13
2	Solder Paste	Alloy	0.0088	Sn	7440-31-5	0.00841	95.00
				Sb	7440-36-0	0.00044	5.00
3	Passive/Active Components		0.7111	Iron Powder (Fe)	7439-89-6	0.52851	74.33
				Copper (Cu)	7440-50-8	0.14142	19.89
				Nickel (Ni)	7440-02-0	0.00494	0.69
				Tin (Sn)	7440-31-5	0.00533	0.75
				Ceramic (Ba) Compounds	12047-27-7	0.03080	4.33
4	FC-DFN		0.0902				
	Active Ics	Silicon		Silicon (Si)	7440-21-3	0.00012	0.13
	Clip	Copper Clip		Copper (Cu)	7440-50-8	0.01397	15.50
				Iron (Fe)	7439-89-6	0.00034	0.38
				Zinc (Zn)	7440-66-6	0.00002	0.02
	Solder Paste	Alloy		Lead (Pb)	7439-92-1	0.00134	1.49
				Silver (Ag)	7440-22-4	0.00004	0.04
				Tin (Sn)	7440-31-5	0.00007	0.08
	Encapsulation	Epoxy Resin		epoxy resin	29690-82-2	0.00164	1.81
				Phenol	9003-35-4	0.00098	1.09
				Silica (Si)	60676-86-0	0.03010	33.38
	Lead frame	Lead frame		Copper (Cu)	7440-50-8	0.03348	37.13
				Iron (Fe)	7439-89-6	0.00083	0.92

				Silver (Ag)	7440-22-4	0.00048	0.53
				Zinc (Zn)	7440-66-6	0.00005	0.05
				Tin (Sn)	7440-31-5	0.00625	6.93
	Wire 1	Copper		Copper (Cu)	7440-50-8	0.00002	0.03
	Wire 2	Gold		Gold (Au)	7440-57-5	0.00044	0.48
5	Active Ics	Silicon	0.0022	Silicon	7440-21-3	0.00222	100.00
6	Wire	Gold	0.0003	Au	7440-57-5	0.00025	99.99
7	Solder Ball	SAC305	0.2436	Sn	7440-31-5	0.23508	96.50
				Ag	7440-22-4	0.00731	3.00
				Cu	7440-50-8	0.00122	0.50
7	Encapsulation	Epoxy Resin	1.4671	Fused Silica	60676-86-0	1.13260	77.20
				Epoxy Resin	no	0.13057	8.90
				Phenol Resin	-	0.13057	8.90
				Crytalline Silica	14808-60-7	0.04401	3.00
				Carbon Black	1333-86-4	0.00734	0.50
				Metal Hydroxide	-	0.02201	1.50
Total Package Weight			2.7488				

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