



ALLIANCE MEMORY MDS REPORT

Part Number:		AS4C64M8D3-12BCN/AS4C64M8D3-12BIN								
Part Weight:		140.36mg								
No.	Part Name	Material Name	Component wt (mg)	Material Content (Element)	CAS Number	Element wt (%)	Element wt (mg)	wt % of Total unit wt	PPM	
1	Substrate	HL-832NXA /AUS 308	30.535	Continuous Filament Fiber Glass	65997-17-3	27.51%	8.400	5.98%	275100	
				Cured thermosetting resin (including inorganic filler)	Trade secret	27.51%	8.400	5.98%	275100	
				Talc containing no asbestiform fibers	14807-96-6	0.39%	0.120	0.09%	3928	
				Morpholine derivative	Trade secret	0.39%	0.120	0.09%	3928	
				Barium sulfate	7727-43-7	4.32%	1.319	0.94%	43208	
				Silica, amorphous	7631-86-9	0.10%	0.030	0.02%	982	
				Dipropylene glycol monomethyl ether	34590-94-8	2.36%	0.720	0.51%	23568	
				Naphthalene	91-20-3	0.10%	0.030	0.02%	982	
				Epoxy resin A	Trade secret	1.28%	0.390	0.28%	12766	
				Epoxy resin B	85954-11-6	0.88%	0.270	0.19%	8838	
				Copper	7440-50-8	33.06%	10.095	7.19%	330600	
				Nickel	7440-02-0	1.64%	0.501	0.36%	16400	
Gold	7440-57-5	0.46%	0.140	0.10%	4600					
2	Mold compound	CEL-9120HF	74.874	Epoxy resin	Trade Secret	5.40%	4.043	2.88%	54000	
				Hardener	Trade secret	5.30%	3.968	2.83%	53000	
				Carbon Black	1333-86-4	0.20%	0.150	0.11%	2000	
				Amorphous silica	60676-86-0	86.65%	64.878	46.22%	866500	
				Crystalline silica	14808-60-7	2.45%	1.834	1.31%	24500	
3	Epoxy	6202C	0.635	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	38.66%	0.245	0.17%	386600	
				Butadiene, acrylonitrile polymer, carboxy-terminated, polymer with bisphenol A and epichlorohydrin	68610-41-3	28.26%	0.179	0.13%	282600	
				Isodecyl alcohol,ethoxylated	61827-42-7	10.00%	0.063	0.05%	100000	
				Silica Filler	112926-00-8	22.43%	0.142	0.10%	224300	
				tert-butyl peroxyneodecanoate	26748-41-4	0.65%	0.004	0.00%	6500	
4	Solder ball	SnAgCu	27.526	Tin	7440-31-5	96.50%	26.563	18.92%	965000	
				Silver	7440-22-4	3.00%	0.826	0.59%	30000	
				Copper	7440-50-8	0.50%	0.138	0.10%	5000	
5	Gold wire	Au	0.188	Gold	7440-57-5	99.99%	0.188	0.13%	999900	
				Others	Trade Secret	0.01%	0.000	0.00%	100	
6	Die	Chip	6.602	Silicon	7440-21-3	100.00%	6.602	4.70%	1000000	
			140.36				600.00%	140.360	100.00%	6000000