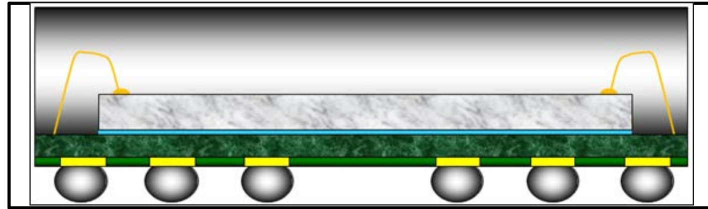
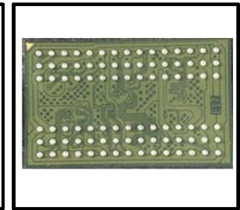
Material Declaration Sheet

-. Device : -AS4C8M32MSB-6BIN
-. Package : 8.0 x 13.0 F90 FBGA
-. Weight (mg) : 143.6mg





Material	Substances	Vendor	Type	Purpose	CAS No.	Weight (mg)	wt % of Total unit wt	Element wt (%)	PPM
Silicon Chip	Silicon (Si)	**WEC**	256M LPSDR	Circuit		7.053	4.91%	100.00%	49116
Mold Compound	Silica, vitreous	EM Networks	LMC705VF	Filler	60676-86-0	65.168	45.38%	87.80%	453819
	4,4'-Bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethyl(1,1'-biphenyl)			Resin	85954-11-6	2.598	1.81%	3.50%	18091
	Phenol polymer with 1,4-bis(methoxymethyl)benzene			Resin	26834-02-6	1.856	1.29%	2.50%	12922
	Phenol polymer with 4,4'-bis(methoxymethyl)1,1'-bisphenyl			Resin	205830-20-2	1.781	1.24%	2.40%	12405
	Formaldehyde polymer with (chloromethyl)oxirane and 2-methylphenol			Resin	29690-82-2	1.856	1.29%	2.50%	12922
	Magnesium hydroxide			Hardener	1309-42-8	0.594	0.41%	0.80%	4135
	Carbon black			Colorant	1333-86-4	0.371	0.26%	0.50%	2584
								100.00%	
Substrate	Glass cloth	SCC	FBJS09003W 2H SU R0	Core material	65997-17-3	5.776	4.02%	12.39%	40222
	Copper			Core material	7440-50-8	13.752	9.58%	29.50%	95768
	Epoxy			Core material	28906-96-9	1.375	0.96%	2.95%	9577
	Heat Resistant Resin			Core material	25722-66-1	1.513	1.05%	3.25%	10534
	Silica Filler			Core material	7631-86-9	2.888	2.01%	6.20%	20111
	Resistant Epoxy Resin			Core material	223769-10-6	1.375	0.96%	2.95%	9577
	Metal Hydroxide			Core material	1318-23-6	0.825	0.57%	1.77%	5746
	3-methoxy-3-methylbutylacetate			Solder mask	103429-90-9	1.744	1.21%	3.74%	12141
	Morpholine derivative			Solder mask	Tradesecret	0.308	0.21%	0.66%	2143
	Barium Sulfate			Solder mask	7727-43-7	2.061	1.44%	4.42%	14355
	Talc containing no asbestiform fibers			Solder mask	14807-96-6	0.308	0.21%	0.66%	2143
	Dipropylene glycol monomethyl ether			Solder mask	34590-94-8	0.615	0.43%	1.32%	4285
	Naphthalene(Carc.Cat.3:R40)			Solder mask	91-20-3	0.082	0.06%	0.18%	571
	Epoxy resin(MW≦700)			Solder mask	Tradesecret	1.089	0.76%	2.34%	7585
	3-methoxy-3-methylbutylacetate			Solder mask	103429-90-9	0.103	0.07%	0.22%	714
	Epoxy resin(MW≦700)			Solder mask	85954-11-6	0.757	0.53%	1.62%	5271
	Barium Sulfate			Solder mask	7727-43-7	1.959	1.36%	4.20%	13641
	Dipropylene glycol monomethyl ether			Solder mask	34590-94-8	1.231	0.86%	2.64%	8570
	Copper Oxide			Copper plating	1317-38-0	0.462	0.32%	0.99%	3217
	Others			Copper plating	/	0.004	0.00%	0.01%	29
	Gold Potassium Cyanide			Metal plating	13967-50-5	0.475	0.33%	1.02%	3308
	Nickel Sulfamate Tetrahydrate			Metal plating	124594-15-6	7.916	5.51%	16.98%	55127
								100.00%	
Die Attach Material (Tape)	Epoxy	INNOX	IDU0B3L-20T	Adhesive materials for die to die, die to sub UV Cure type dicing tape	29690-82-2	0.101	0.07%	20.00%	703
	Acrylate copolymer				Trade secret	0.101	0.07%	20.00%	703
	Hardener				Trade secret	0.050	0.04%	10.00%	351
	Silica				7631-86-9	0.252	0.18%	50.00%	1757
								100.00%	
Wire	Gold	LT Metal	HS-G3 0.7mil	Balance Material	7440-57-5	0.281	0.20%	80.05%	1956
	Silver			Enhance mechanical strength	7440-22-4	0.067	0.05%	19.00%	464
	Palladium			Enhance reliability	7440-05-3	0.003	0.00%	0.94%	23
	Others			-	-	0.000	0.00%	0.01%	0
								100.00%	
Solder Ball	Tin	DSH	0.3mm(Sn/1.2Ag/0.5Cu/0.05Ni)	Remain	7440-31-5	14.590	10.16%	98.25%	101603
	Silver			Conductivity Improvement	7440-22-4	0.178	0.12%	1.20%	1241
	Copper			Heat resistance improvement	7440-50-8	0.074	0.05%	0.50%	517
	Nickel			Thermal stability of alloy	7440-02-0	0.007	0.01%	0.05%	52
								100.00%	
					Total	143.600	100.0%		

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Fax: 425-896-8628 Alliance Memory Inc. reserves the right to change products or specification without notice