



MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)			
M2GL050	FG484(23x23mm)	2.34			
Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
MOLD COMPOUND	38.90	Silica	60676-86-0	0.8438	92.7
		Resin	Proprietary	0.0455	5
		Metal Hydroxide	Proprietary	0.0182	2
		Carbon Black	1333-86-4	0.0027	0.3
				0.91029	100
SUBSTRATE	35.34	Bismaleimide/Triazine	13676-54-5	0.5429	65.65
		Copper (Cu)	7440-50-8	0.2642	31.95
		Gold (Au)	7440-57-5	0.0032	0.385
		Nickel (Ni)	7440-02-0	0.0167	2.015
				0.8270	100
DIE	2.05	Silicon	7440-21-3	0.0479	100
				0.0479	100
DIE ATTACH EPOXY	0.31	Silver	7440-22-4	0.0055	76
		Epoxy Resin	Proprietary	0.0017	24
				0.0072	100
SOLDER BALL	21.88	Tin	7440-31-5	0.3226	63
		Lead	7439-92-1	0.1895	37
				0.5121	100
GOLD WIRE	1.52	Gold	7440-57-5	0.0355	99.99
		Doping	Proprietary	0.0000	0.01
				0.0355	100
				2.3400	

Disclaimer: Microsemi believes this information to be correct, but cannot guarantee its completeness or accuracy. The information is based on data received from sources outside our company.

Revision No.	Date	Description of Change
	2/12/2014	Original release



MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)			
M2GL050	FCS325(11x11mm)	0.2319			
Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
MOLD COMPOUND	28.75	Silica A	60676-86-0	0.0473	71.00
		Silica B	7631-86-9	0.0050	7.50
		Resin	Proprietary	0.0090	13.50
		Carbon Black	1333-86-4	0.0003	0.50
		Others	Proprietary	0.0050	7.50
				0.06666	100.00
SUBSTRATE	35.49	Resin	Proprietary	0.0201	24.44
		Glass Fiber	65997-17-3	0.0134	16.31
		Copper (Cu)	7440-50-8	0.0449	54.55
		Tin (Sn)	7440-31-5	0.0017	2.05
		Others	Proprietary	0.0022	2.65
				0.0823	100.00
DIE	8.13	Silicon	7440-21-3	0.0188	100.00
				0.0188	100.00
UNDERFILL	3.38	Silica, vitreous	60676-86-0	0.0051	65.00
		p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	0.0008	10.00
		Bisphenol F epoxy resin	9003-36-5	0.0008	10.00
		Bisphenol A epoxy resin	25068-38-6	0.0003	4.00
		Other aliphatic amine compounds	Proprietary	0.0005	7.00
		Carbon Black	1333-86-4	0.0001	1.00
		Proprietary Additives	Proprietary	0.0002	3.00
				0.0078	100.00
SOLDER BALL	17.42	Tin (Sn)	7440-31-5	0.0255	63.00
		Lead (Pb)	7439-92-1	0.0149	37.00
				0.0404	100.00
BUMP	6.83	Tin (Sn)	7440-31-5	0.0155	97.70
		Silver (Ag)	7440-22-4	0.0004	2.30
				0.0158	100.00
				0.2319	

Disclaimer: Microsemi believes this information to be correct, but cannot guarantee its completeness or accuracy. The information is based on data received from sources outside our company.

Revision No.	Date	Description of Change
1	2015/11/10	Original release



MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)			
M2GL050	FG896(31x31mm)	4.08			
Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
MOLD COMPOUND	39.63	Silica	60676-86-0	1.4293	88.5
		Resin	Proprietary	0.1857	11.5
		Metal Hydroxide	Proprietary	0.0000	0
		Carbon Black	1333-86-4	0.0000	0
				1.61508	100
SUBSTRATE	36.01	Bismaleimide/Triazine	13676-54-5	0.8220	56
		Copper (Cu)	7440-50-8	0.6146	41.87
		Gold (Au)	7440-57-5	0.0053	0.36
		Nickel (Ni)	7440-02-0	0.0260	1.77
				1.4678	100
DIE	1.17	Silicon	7440-21-3	0.0478	100
				0.0478	100
DIE ATTACH EPOXY	0.08	Silver	7440-22-4	0.0026	78
		Epoxy Resin	Proprietary	0.0007	22
				0.0033	100
SOLDER BALL	21.87	Tin	7440-31-5	0.5615	63
		Lead	7439-92-1	0.3298	37
				0.8913	100
GOLD WIRE	1.23	Gold	7440-57-5	0.0503	99.99
		Doping	Proprietary	0.0000	0.01
				0.0503	100
				4.0756	

Disclaimer: Microsemi believes this information to be correct, but cannot guarantee its completeness or accuracy. The information is based on data received from sources outside our company.

Revision No.	Date	Description of Change
	11/10/2015	Original release



MATERIAL DECLARATION DATA SHEET

Device Name M2GL050	Package Type VF400	Pkg Wt (g) 0.9744			
Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
MOLD COMPOUND	36.33	Silica	60676-86-0	0.2974	84
		Resin	Proprietary	0.0559	15.8
		Carbon Black	1333-86-4	0.0007	0.2
				0.35399	100
SUBSTRATE	44.69	Bismaleimide/Triazine	13676-54-5	0.2859	65.65
		Copper (Cu)	7440-50-8	0.1391	31.95
		Gold (Au)	7440-57-5	0.0017	0.385
		Nickel (Ni)	7440-02-0	0.0088	2.015
				0.4355	100
DIE	4.91	Silicon	7440-21-3	0.0479	100
				0.0479	100
DIE ATTACH EPOXY	0.56	Silver	7440-22-4	0.0041	76
		Epoxy resin	Proprietary	0.0013	24
				0.0054	100
SOLDER BALL	12.10	Tin	7440-31-5	0.0743	63
		Lead	7439-92-1	0.0436	37
				0.1179	100
GOLD WIRE	1.41	Gold	7440-57-5	0.0137	99.99
		Doping	Proprietary	0.0000	0.01
				0.0137	100
				0.9744	

Disclaimer: Microsemi believes this information to be correct, but cannot guarantee its completeness or accuracy. The information is based on data received from sources outside our company.

Revision No.	Date	Description of Change
1	2014/6/25	Original release
2	2015/11/9	Add M2S060, M2GL060