MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)			
M2GL150	FC1152(35x35mm)	9.52			
Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
Heat Spreader (Lid)	56.78	Copper (Cu)	7440-50-8	5.3010	98.04
		Nickel (Ni)	7440-02-0	0.1060	1.96
				5.40700	100
Thermal Grease	0.525	Proprietary Silicone	Proprietary	0.0025	5
		Zn Compounds	1314-13-2	0.0100	20
		Aluminum	7429-90-5	0.0375	75
				0.05000	100
Lid Adhesive	0.473	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	0.0203	45
		Quartz	14808-60-7	0.0151	33.5
		Dimethylvinylated and trimethylated silica	68988-89-6	0.0068	15
		Silica	60676-86-0	0.0023	5
		Dimethyl, methylhydrogen siloxane	68037-59-2	0.0005	1
		Carbon Black	1333-86-4	0.0002	0.5
				0.04500	100
SUBSTRATE	28.25	Resin	Proprietary	1.3538	50.32
		Copper (Cu)	7440-50-8	1.2601	46.85
		SOP	Proprietary	0.0098	0.37
		Others		0.0663	2.47
				2.6900	100.00
DIE	1.33	Silicon	7440-21-3	0.1262	100
				0.1262	100
UNDERFILL	0.58	Silica, vitreous	60676-86-0	0.0330	60
		p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	0.0083	15
		Phenolic Polymer Resin, Epikote 155	9003-36-5	0.0055	10
		4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane	25068-38-6	0.0017	3
		Other aliphatic amine compounds	Proprietary	0.0055	10
		Carbon Black	1333-86-4	0.0003	0.5
		Proprietary Additives	Proprietary	0.0003	0.5
		Bismuth compounds	Proprietary	0.0006	1
				0.0550	100
SOLDER BALL	12.01	Tin (Sn)	7440-31-5	0.7205	63
		Lead (Pb)	7439-92-1	0.4232	37
				1.1437	100
BUMP	0.06	Tin (Sn)	7440-31-5	0.0058	97.7
		Silver (Ag)	7440-22-4	0.0001	2.3
				0.0059	100
				9.523	

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Revision No.	Date	Description of Change
	12/23/2014	Original release

MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)
M2GL150	FCS536(16x16mm)	0.6090

Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
MOLD COMPOUND	28.69	Silica A	60676-86-0	0.1241	71.00
		Silica B	Proprietary	0.0131	7.50
		Resin	Proprietary	0.0236	13.50
		Aluminium and its compound	Proprietary	0.0131	7.50
		Carbon Black	1333-86-4	0.0009	0.50
				0.17475	100.00
SUBSTRATE	39.97	Resin	Proprietary	0.0570	23.43
		Copper (Cu)	7440-50-8	0.1411	57.99
		Glass Fiber	65997-17-3	0.0439	18.05
		Others	Proprietary	0.0013	0.53
				0.2434	100.00
DIE	17.17	Silicon	7440-21-3	0.1046	100.00
				0.1046	100.00
UNDERFILL	2.34	Silica, vitreous	60676-86-0	0.0093	65.00
		p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)aniline	5026-74-4	0.0014	10.00
		Bisphenol F epoxy resin	9003-36-5	0.0014	10.00
		Bisphenol A epoxy resin	25068-38-6	0.0006	4.00
		Other aliphatic amine compounds	Proprietary	0.0010	7.00
		Carbon Black	1333-86-4	0.0001	1.00
		Proprietary Additives	Proprietary	0.0004	3.00
				0.0143	100.00
SOLDER BALL	10.95	Tin (Sn)	7440-31-5	0.0420	63.00
		Lead (Pb)	7439-92-1	0.0247	37.00
				0.0667	100.00
BUMP	0.87	Tin (Sn)	7440-31-5	0.0006	10.57
		Silver (Ag)	7440-22-4	0.0000	0.20
		Copper (Cu)	7440-50-8	0.0047	89.23
				0.0053	100.00
				0.6090	

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

MATERIAL DECLARATION DATA SHEET

Device Name	Package Type	Pkg Wt (g)
M2GL150	FCV484(19x19)	3.20

Material Breakdown of Component	Material Breakdown (%)	Substance Name	CAS No.	Weight (g)	Substance Mass (%)
Heat Spreader	44.68	Copper	7440-50-8	1.3844	96.97
		Nickel	7440-02-0	0.0428	3.00
		Epoxy resin	Proprietary	0.0002	0.01
		Others	Proprietary	0.0002	0.02
				1.4277	100.00
SUBSTRATE	34.42	Copper (Cu)	7440-50-8	0.3924	35.67
		Glass Fiber	65997-17-3	0.2303	20.94
		Inorganic Fiber	Proprietary	0.2245	20.41
		Organic Resin	Proprietary	0.1209	10.99
		Cured Resin	Proprietary	0.0594	5.40
		Barium Sulfate	7727-43-7	0.0292	2.65
		Tin (Sn)	7440-31-5	0.0201	1.83
		Silica	7631-86-9	0.0066	0.60
		Other epoxy resin	Proprietary	0.0045	0.41
		Others	Proprietary	0.0121	1.10
				1.1000	100.00
DIE	9.99	Silicon	7440-21-3	0.3191	100.00
				0.3191	100.00
Underfill	1.25	Silica, Vitreous	60676-86-0	0.0239	60.00
		1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-48-6	0.0232	15.00
		Bisphenol F type liquid epoxy resin	9003-36-5	0.0091	10.00
		Proprietary Material-Other aliphatic amine compounds	Proprietary	0.0246	10.00
		Bisphenol A type liquid epoxy resin	25068-38-6	0.0074	3.00
		Others	Proprietary	0.0002	2.00
				0.0399	100.00
SOLDER BALL	7.70	Tin (Sn)	7440-31-5	0.1550	63.00
		Lead (Pb)	7439-92-1	0.0910	37.00
				0.2460	100.00
TIM	1.57	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2	0.0151	30.00
		Treated aluminium oxide	Proprietary	49.0000	70.00
				0.0503	100.00
Solder Bump	0.40	Tin (Sn)	7440-31-5	0.0124	97.70
		Silver (Ag)	7440-22-4	0.0529	2.30
				0.0127	100.00
				3.1957	

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Revision No.	Date	Description of Change
1	2016/2/1	Original release