



100% Material Declaration Data Sheet for FFG1152

PK094 (v1.4) May 13, 2016

Average Weight : 13.8620 g

Component	Substance Description	CAS # or Description	% of Component	Use in product	Component Weight	Component % of total
Silicon Die					0.761860	5.490%
	Silicon	7440-21-3	100.000		0.761800	
Solder Bump					0.036790	0.270%
	Tin	7440-31-5	63.000		0.023176	
	Lead	7439-92-1	37.000		0.013611	
Underfill					0.074000	0.540%
	Epoxy Resin A	9003-36-5	20.000		0.014800	
	Epoxy Resin B	25068-38-6	3.000		0.002220	
	Silica	60676-86-0	70.000		0.051800	
Heat Spreader					6.000000	43.270%
	Copper	7440-50-8	99.900		5.994000	
Heat Spreader Adhesive					0.150000	1.082%
	Nickel	7440-02-0	0.100		0.000600	
Heat Spreader Adhesive					0.150000	1.082%
	Organopolysiloxane mixture		100.000		0.150000	
Solder Balls					0.962340	6.940%
	Tin	7440-31-5	95.500		0.919035	
	Silver	7440-22-4	4.000		0.038494	
Substrate					5.880000	42.410%
	Copper	7440-50-8	46.13	Metal Layer	2.712444	
	Tin	7440-31-5	0.70	Metal Layer	0.041160	
	Lead	7439-92-1	0.11	Metal Layer	0.006468	
	Silver	7440-22-4	0.02		0.001176	
	Core	N/A	37.28		2.192064	
	ABF	N/A	13.12		0.771456	
Solder Mask	N/A	2.63		0.154644		

Revision History

Date	Version	Description of Revisions
03/14/2006	1.0	Initial Initial release.
06/29/2006	1.1	100% Material Declaration.
09/27/2006	1.2	Updated component descriptions.
07/20/2010	1.3	Updated Heat Spreader substance description
05/13/2016	1.4	Updated substrate

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