



PK109 (v1.4) January 19,
2012

100% Material Declaration Data Sheet for FGG456 Package

Average Weight: 1.9500 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					0.043630	2.237
	Silicon	7440-21-3	100.00		0.043630	
Die Attach Material					0.007979	0.409
	Silver	7440-22-4	77.50		0.006184	
	Bismaleimide monomer	Trade Secret	15.00		0.001197	
	Acrylate monomer	Trade Secret	7.50		0.000598	
Mold Compound					0.811861	41.634
	Epoxy Resin A	Trade Secret	3.00		0.024356	
	Epoxy Resin B	Trade Secret	3.00		0.024356	
	Phenol Resin A	Trade Secret	3.00		0.024356	
	Phenol Resin B	Trade Secret	3.00		0.024356	
	Metal Hydroxide	Trade Secret	1.50		0.012178	
	Carbon black	1333-86-4	0.30		0.002436	
	Silica fused	60676-86-0	70.90		0.575609	
	Silica fused	7631-86-9	15.00		0.121779	
	Silica, crystalline	14808-60-7	0.30		0.002436	
	Gold Wire					
Gold (Au)		7440-57-5	99.048		0.010105	
Palladium		7440-05-3	0.950		0.000097	
Impurities		N/A	0.002		0.000000	
Solder Balls					0.381957	19.588
	Tin (Sn)	7440-31-5	95.50		0.364769	
	Silver (Ag)	7440-22-4	4.00		0.015278	
	Copper (Cu)	7440-50-8	0.50		0.001910	

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Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Substrate					0.694371	35.609
	Copper (Cu)	7440-50-8	42.51		0.295181	
	Gold (Au)	7440-57-5	0.21		0.001473	
	Nickel (Ni)	7440-02-0	1.63		0.011334	
	Copper Foil	7440-50-8	7.12		0.049463	
	Glass Fiber	65997-17-3	13.28		0.092238	
	Inorganic Filler	13776-74-4, 7631-86-9	6.06		0.042073	
	BT (core)	13676-54-5/ 25722-66-1/ 29690-82-2/ 68541-56-0/ 25068-38-6/ 7440-50-8/ 13676-54-5/ 25722-66-1/ 29690-82-2/ 26265-08-7	22.61		0.156966	
	Solder mask	64742-94-5/ 91- 20-3/ 14807-96-6/ 7727-43-7/ 7631- 86-9/ 34590-94-8/ 85954-11-6	6.57		0.045642	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
3/21/06	1.0	Initial Xilinx release.
7/05/06	1.1	100% Material Declaration
7/21/06	1.2	Corrected % of Component (Laminate), Component % of Total (Bond Wire & Solder Balls) sections.
9/27/06	1.3	Updated component descriptions.
01/19/12	1.4	Updated component weights and descriptions.

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