XILINX®

PK104 (v1.6) July 27, 2017

100% Material Declaration Data Sheet for FSG48

Average Weight : 0.1416 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.016285**	**11.50%**
	Silicon	7440-21-3	99.91	Silicon IC	0.016270	
	Aluminium(Al)	7429-90-5	0.04	Silicon IC	0.000007	
	Copper	7440-50-8	0.02	Silicon IC	0.000004	
	Titanium (Ti)	7440-32-6	0.02	Silicon IC	0.000004	
Die Attach					**0.001747**	**1.23%**
	Silver	7440-22-4	75.00	Glue	0.001310	
	Epoxy Cresol Novolak	29690-82-2	24.80	Glue	0.000433	
	Diisobutyrate derivate	6846-50-0	0.20	Glue	0.000003	
Bonding Wire					**0.000397**	**0.28%**
	Gold	7440-57-5	100.00	Wire	0.000397	
Mold compound					**0.079208**	**55.93%**
	Biphenyl epoxy resin	85954-11-6	12.00	Encapsulation	0.009505	
	Phenol resin	9003-35-4	7.00	Encapsulation	0.005545	
	Quartz	14808-60-7	2.50	Encapsulation	0.001980	
	Silica, vitreous	60676-86-0	77.00	Encapsulation	0.060990	
	Carbon black	1333-86-4	0.50	Encapsulation	0.000396	
	Antimony Trioxide		0.50	Encapsulation	0.000396	
	Brominated epoxy resin (Halogen)	Trade secret	0.50	Encapsulation	0.000396	
Solder Ball					**0.011790**	**8.32%**
	Tin	7440-31-5	98.27	Base metal	0.011586	
	Silver	7440-22-4	1.20	Base metal	0.000141	
	Copper	7440-50-8	0.50	Base metal	0.000059	
	Nickel	7440-02-0	0.02	Base metal	0.000002	
	Lead	7439-92-1	0.01	Base metal	0.000001	
Substrate					**0.032197**	**22.73%**
	Copper	7440-50-8	38.00		0.012235	
	Nickel	7440-02-0	1.24		0.000401	
	Gold	7440-57-5	0.16		0.000052	
	Core	N/A	44.72		0.014400	
	Solder Mask	N/A	15.87		0.005109	

Revision History

Date	Version	Description of Revisions
3/20/2006	1.0	Initial Xilinx release.
5/10/2006	1.1	100% Material Declaration
9/21/2006	1.2	Updated component description
8/1/2007	1.3	Updated component description. Per XCN06024
1/28/2011	1.4	Updated component description
6/10/2011	1.5	Updated component description
7/27/2017	1.6	Updated Substrate component, per XCN17007

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