PK190 (v1.1) Apr 14, 2016

100% Material Declaration Data Sheet for Virtex-5 FFG1760

Average Weight : 22.7955 g

Component	Substance Description	CAS # or Description	% of Component	Use in product	Component Weight	Component % of total
Silicon Die					1.039000	**4.558%**
	Silicon	7440-21-3	100.000		1.039000	
Solder Bump					0.051269	**0.225%**
	Tin (Sn)	7440-31-5	63.000		0.032299	
	Lead	7439-92-1	37.000		0.018969	
Underfill					0.105000	**0.461%**
	Silica	60676-86-0	70.000		0.073500	
	Epoxy Resin A	9003-36-5	20.000		0.021000	
	Epoxy Resin B	25068-38-6	3.000		0.003150	
	Hardener	19900-65-3	7.000		0.007350	
Heat Spreader					11.000000	**48.255%**
	Copper	7440-50-8	99.900		10.989000	
	Nickel	7440-02-0	0.100		0.011000	
Heat Spreader Adhesive					0.180000	**0.790%**
	Organopolysiloxane mixture	N/A	100.000		0.180000	
Solder Ball					1.470240	**6.450%**
	Tin	7440-31-5	95.500		1.404079	
	Silver	7440-22-4	4.000		0.058810	
	Copper	7440-50-8	0.500		0.007351	
Substrate					8.950000	**39.262%**
	Copper	7440-50-8	49.51	Metal Layer	4.431145	
	Tin	7440-31-5	0.72	Metal Layer	0.064440	
	Lead	7439-92-1	0.14	Metal Layer	0.012530	
	Silver	7440-22-4	0.02		0.001790	
	Core	N/A	34.75		3.110125	
	ABF	N/A	12.42		1.111590	
	Solder Mask	N/A	2.44		0.218380	

Revision History

Date	Version	Description of Revisions
05/06/2006	1.0	Initial Xilinx release
04/14/2016	1.1	Update substrate

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