PK848(v1.0) November 30, 2016

100% Material Declaration Data Sheet for Virtex-5 FFG324 RoHS 6/6

Average Weight : 2.7700 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.248094**	**8.956%**
	Silicon	7440-21-3	100.00	basis	0.248094	
Bump					**0.007106**	**0.257%**
	Tin	7440-31-5	98.20	basis	0.006978	
	Silver	7440-22-4	1.80	basis	0.000128	
Underfill					**0.040000**	**1.444%**
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.006000	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.004000	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.002000	
	Amine type hardener	trade secret	10.00	basis	0.004000	
	Silicon dioxide	60676-86-0	58.00	filler	0.023200	
	Carbon black	1333-86-4	1.00	color agent	0.000400	
	Additives	trade secret	1.00	additives	0.000400	
Heat sink					**1.500000**	**54.152%**
	Copper	7440-50-8	98.35	Main material	1.475250	
	Nickel	7440-02-0	1.65	Main material	0.024750	
Heat sink adhesive					**0.070000**	**2.527%**
	Aluminium Oxide Al2O3	-	80.00	Main material	0.056000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.014000	
Solder ball					**0.271391**	**9.798%**
	Tin	7440-31-5	95.50	Main material	0.259178	
	Silver	7440-22-4	4.00	Main material	0.010856	
	Copper	7440-50-8	0.50	Main material	0.001357	
Substrate					**0.633409**	**22.867%**
	Copper	7440-50-8	38.93		0.246586	
	Tin	7440-31-5	1.05		0.006651	
	Silver	7440-22-4	0.08		0.000507	
	Resin	N/A	0.13		0.000823	
	Core	N/A	42.77		0.270909	
	ABF	N/A	14.56		0.092224	
	Solder Mask	N/A	2.48		0.015709	

Revision History

Date	Version	Description of Revisions
11/30/2016	1.0	Initial Xilinx release.

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