PK403 (v1.3) September 28, 2012

100% Material Declaration Data Sheet FFG484

Average Weight: 4.0582g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die (FPGA)					**0.340000**	**8.378**
	Doped silicon	7440-21-3	100.00	Basis	0.340000	
Solder Bump					**0.173000**	**4.263**
	Tin	7440-31-5	63.00	Basis	0.108990	
	Lead	7439-92-1	37.00	Basis	0.064010	
Die Underfill					**0.130000**	**3.203**
	Bisphenol F-type liquid epoxy resin	9003-36-5	20.00	Basis	0.026000	
	Phenolic resin	Trade secret	15.00	Basis	0.019500	
	Bisphenol A-type liquid epoxy resin	25068-38-6	2.50	Basis	0.003250	
	Amine type accelerator	Trade secret	2.50	Basis	0.003250	
	Silicon dioxide	60676-86-0	57.00	Basis	0.074100	
	Carbon black	1333-86-4	0.50	Basis	0.000650	
	Additives	Trade secret	2.50	Basis	0.003250	
Substrate					**1.316698**	**32.446**
	Cu	7440-50-8	24.96	Main Material	0.328651	
	Tin	7440-31-5	1.62	Main Material	0.021349	
	Lead	7439-92-1	0.54	Main Material	0.007158	
	Silver	7440-22-4	0.02	Main Material	0.000309	
	BT Core	N/A	32.94	Main Material	0.43378	
	ABF	N/A	38.57	Main Material	0.50784	
	Solder Mask	N/A	1.34	Main Material	0.017611	

© Copyright 2010-2012 Xilinx, Inc. XILINX, the Xilinx logo, Virtex, Spartan, ISE, and other designated brands included herein are trademarks of Xilinx in the United States and other countries. All other trademarks are the property of their respective owners

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Capacitor 1					**0.028000**	**0.690**
	Ceramic (BaTiO3 type)	Trade secret	64.60	Ceramic	0.018088	
	Inner electrode (Ni)	7440-02-0	22.00	Inner electrode	0.006160	
	Outer electrode (Cu)	7440-50-8	12.10	Outer electrode	0.003388	
	Plating1 (Ni)	7440-02-0	0.50	Plating1	0.000140	
	Plating2 (Sn)	7440-31-5	0.80	Plating2	0.000224	
Capacitor 2					**0.036000**	**0.887**
	Ceramic (BaTiO3 type)	Trade secret	67.40	Ceramic	0.024264	
	Inner electrode (Ni)	7440-02-0	17.00	Inner electrode	0.006120	
	Outer electrode (Cu)	7440-50-8	13.80	Outer electrode	0.004968	
	Plating1 (Ni)	7440-02-0	0.50	Plating1	0.000180	
	Plating2 (Sn)	7440-31-5	1.30	Plating2	0.000468	
Capacitor 3					**0.001800**	**0.044**
	Ceramic (BaTiO3 type)	Trade secret	61.80	Ceramic	0.001112	
	Inner electrode (Ni)	7440-02-0	27.00	Inner electrode	0.000486	
	Outer electrode (Cu)	7440-50-8	9.90	Outer electrode	0.000178	
	Plating1 (Ni)	7440-02-0	0.40	Plating1	0.000007	
	Plating2 (Sn)	7440-31-5	0.90	Plating2	0.000016	
Heat Sink					**1.354700**	**33.382**
	Copper	7440-50-8	97.25	Main material	1.317446	
	Nickel	7440-02-0	2.75	Main material	0.037254	
Heat Sink Adhesive					**0.140000**	**3.450**
	Bisphenol A-type liquid epoxy resin	25068-38-6	2.50	Main material	0.003500	
	Bisphenol F-type liquid epoxy resin	9003-36-5	25.00	Main material	0.035000	
	Phenolic resin	9003-35-4	15.00	Main material	0.021000	
	Silicon dioxide	60676-86-0	54.50	Main material	0.076300	
	Carbon black	1333-86-4	0.50	Main material	0.000700	
	Additive	2530-83-8	2.50	Main material	0.003500	
Solder Balls					**0.527485**	**12.998**
	Tin	7440-31-5	96.50	Base metal	0.509023	
	Silver	7440-22-4	3.00	Base metal	0.015825	
	Copper	7440-50-8	0.50	Base metal	0.002637	
Solder Paste					**0.010500**	**0.259**
	Tin	7440-31-5	96.50	Basis	0.010133	
	Silver	7440-22-4	3.00	Basis	0.000315	
	Copper	7440-50-8	0.50	Basis	0.000053	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
05/19/10	1.0	Initial Xilinx release.
11/19/10	1.1	1. Correct CAS# for N, Ndimethylformamide to 68-12-2 2. Change percentage of substrate component to actual percentage values 3. Add component “Amine type accelerator” as component of “Die Underfill”
05/15/12	1.2	Component Weight Update.
09/28/12	1.3	Updated Substrate Component.

Notice of Disclaimer

Xilinx regards this materials data to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Xilinx subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers (“Contractors”). All data provided hereunder is based on information received from Contractors. Xilinx has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Xilinx products.