PK434 (v1.1) March 29, 2013

100% Material Declaration Data Sheet FFG1759

Average Weight: 15.4006 g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die				Silicon IC	**0.656000**	**4.260**
	Doped silicon	7440-21-3	100.00	Basis	0.656000	
Solder Bump				Die to package	**0.050631**	**0.329**
	Tin	7440-31-5	63.00	Basis	0.031898	
	Lead	7439-92-1	37.00	Basis	0.018734	
Die Underfill					**0.130000**	**0.844**
	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	5.00	Basis	0.006500	
	Amine type accelerator	Trade secret	5.00	Basis	0.006500	
	Silicon dioxide	60676-86-0	51.50	Basis	0.066950	
	Carbon black	1333-86-4	1.00	Basis	0.001300	
	Additives	Trade secret	2.50	Basis	0.003250	
Solder Paste					**0.105000**	**0.682**
	Tin	7440-31-5	96.50	Basis	0.101325	
	Silver	7440-22-4	3.00	Basis	0.003150	
	Copper	7440-50-8	0.50	Basis	0.000525	
Substrate					**5.285891**	**34.323**
	Copper	7440-50-8	33.432	Main material	1.767183	
	Nickel	7440-02-0	0.418	Main material	0.022095	
	Gold	7440-57-5	0.091	Main material	0.004787	
	Lead	7439-92-1	0.611	Main material	0.032301	
	Tin	7440-31-5	1.040	Main material	0.054998	
	Core	N/A	46.473	Main material	2.456500	
	ABF	N/A	16.402	Main material	0.867000	
	Solder mask	N/A	1.533	Main material	0.081027	

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Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Capacitor 1					**0.056000**	**0.364**
	Ceramic (BaTiO3 type)	Trade secret	61.80	Ceramic	0.034608	
	Inner electrode (Ni)	7440-02-0	27.00	Inner electrode	0.015120	
	Outer electrode (Cu)	7440-50-8	9.90	Outer electrode	0.005544	
	Plating1 (Ni)	7440-02-0	0.40	Plating1	0.000224	
	Plating2 (Sn)	7440-31-5	0.90	Plating2	0.000504	
Capacitor 2					**0.074100**	**0.481**
	Ceramic (BaTiO3 type)	Trade secret	67.40	Ceramic	0.049943	
	Inner electrode (Ni)	7440-02-0	17.00	Inner electrode	0.012597	
	Outer electrode (Cu)	7440-50-8	13.80	Outer electrode	0.010226	
	Plating1 (Ni)	7440-02-0	0.50	Plating1	0.000371	
	Plating2 (Sn)	7440-31-5	1.30	Plating2	0.000963	
Heat Sink					**7.310000**	**47.466**
	Copper	7440-50-8	98.65	Main material	7.211315	
	Nickel	7440-02-0	1.35	Main material	0.098685	
Heat Sink Adhesive					**0.260000**	**1.688**
	Aluminum dioxide	1344-28-1	70.00	Main material	0.182000	
	Zinc oxide	1314-13-2	15.00	Main material	0.039000	
	Organic silicon compound	trade secret	15.00	Main material	0.039000	
Solder Balls					**1.473000**	**9.565**
	Tin (Sn)	7440-31-5	95.50	Main material	1.406715	
	Silver (Ag)	7440-22-4	4.00	Main material	0.058920	
	Copper (Cu)	7440-50-8	0.50	Main material	0.007365	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
03/11/11	1.0	Initial Xilinx release.
03/29/13	1.1	Updated Substrate Component

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