



100% Material Declaration Data Sheet for FFG1759 Virtex®-6

PK427 (v1.2) October 19, 2012

Average Weight: 20.8072 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	0.935666	4.497
	Doped silicon	7440-21-3	100.00	Basis	0.935666	
Solder Bump				Die to package	0.048899	0.235
	Tin	7440-31-5	63.00	Basis	0.030806	
	Lead	7439-92-1	37.00	Basis	0.018093	
Die Underfill					0.130000	0.625
	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	
Substrate					5.886081	28.289
	Copper	7440-50-8	35.78	Main material	2.106128	
	Tin	7440-31-5	0.89	Main material	0.052415	
	Lead	7439-92-1	0.19	Main material	0.011172	
	Silver	7440-22-4	0.02	Main material	0.001084	
	BT Core	N/A	42.35	Main material	2.492625	
	ABF	N/A	19.64	Main material	1.156000	
	Soldermask	N/A	1.13	Main material	0.066657	

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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
Solder Paste					0.083000	0.399
	Tin	7440-31-5	96.50	Basis	0.080095	
	Silver	7440-22-4	3.00	Basis	0.002490	
	Copper	7440-50-8	0.50	Basis	0.000415	
Capacitor 1					0.056000	0.269
	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					0.081900	0.394
	Ceramic (BaTiO3 type)	Trade secret	67.40	Ceramic	0.055201	
	Inner electrode (Ni)	7440-02-0	17.00	Inner electrode	0.013923	
	Outer electrode (Cu)	7440-50-8	13.80	Outer electrode	0.011302	
	Plating1 (Ni)	7440-02-0	0.50	Plating1	0.000410	
	Plating2 (Sn)	7440-31-5	1.30	Plating2	0.001065	
Capacitor 3					0.005400	0.026
	Ceramic (BaTiO3 type)	Trade secret	66.00	Ceramic	0.003564	
	Inner electrode (Ni)	7440-02-0	2.67	Inner electrode	0.000144	
	Outer electrode (Cu)	7440-50-8	23.33	Outer electrode	0.001260	
	Plating1 (Ni)	7440-02-0	2.33	Plating1	0.000126	
	Plating2 (Sn)	7440-31-5	5.67	Plating2	0.000306	
Heat Sink					11.900000	57.192
	Copper	7440-50-8	97.94	Main material	11.654860	
	Nickel	7440-02-0	2.06	Main material	0.245140	
Heat Sink Adhesive					0.210000	1.009
	Aluminium Oxide	1344-28-1	70.00	Main material	0.147000	
	Zinc Oxide	1314-13-2	15.00	Main material	0.031500	
	Silicone	Trade Secret	15.00	Main material	0.031500	
	Additive	Trade Secret		Additive		
Solder Balls					1.470244	7.066
	Tin (Sn)	7440-31-5	96.50	Base metal	1.418785	
	Silver (Ag)	7440-22-4	3.00	Base metal	0.044107	
	Copper (Cu)	7440-50-8	0.50	Base metal	0.007351	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
09/27/10	1.0	Initial Xilinx release
10/26/10	1.1	Updated component descriptions
10/19/12	1.2	Update Substrate component

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