



100% Material Declaration Data Sheet for 7 Series FFG1761

PK554 (v1.1) October 26, 2012

Average Weight: 20.7610 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					0.828955	3.993
	Silicon (Si)	7440-21-3	100.00	Basis	0.828955	
Solder Bump					0.038857	0.187
	Tin (Sn)	7440-31-5	63.00	Basis	0.024480	
	Lead (Pb)	7439-92-1	37.00	Basis	0.014377	
Solder Paste					0.014700	0.071
	Tin (Sn)	7440-31-5	96.50	Basis	0.014186	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000441	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000074	
Capacitor 1					0.041280	0.199
	BaTiO3 type	12047-27-7	61.80	Ceramic	0.025511	
	Inner Electrode(Ni)	7440-02-0	27.00	Inner electrode	0.011146	
	Outer Electrode(Cu)	7440-50-8	9.90	Outer Electrode	0.004087	
	Plating1(Ni)	7440-02-0	0.40	Plating1	0.000165	
	Plating2(Sn)	7440-31-5	0.90	Plating2	0.000372	
Capacitor 2					0.022800	0.110
	BaTiO3 type	12047-27-7	61.70	Ceramic	0.014068	
	Inner Electrode(Ni)	7440-02-0	4.89	Inner electrode	0.001115	
	Indium Tin Oxide	50926-11-9	18.30	Outer Electrode	0.004172	
	Outer Electrode(Cu)	7440-50-8	13.40	Outer Electrode	0.003055	
	Plating1(Ni)	7440-02-0	0.49	Plating1	0.000112	
	Plating2(Sn)	7440-31-5	1.22	Plating2	0.000278	
Capacitor 3					0.005400	0.026
	BaTiO3 type	12047-27-7	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	

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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 4					0.015810	0.076
	BaTiO3 type	12047-27-7	51.10	Ceramic	0.008079	
	Inner Electrode(Ni)	7440-02-0	27.00	Inner electrode	0.004269	
	Outer Electrode(Cu)	7440-50-8	16.00	Outer Electrode	0.002530	
	Glass	65997-17-3	0.90		0.000142	
	Plating1(Ni)	7440-02-0	2.00	Plating1	0.000316	
	Plating2(Sn)	7440-31-5	3.00	Plating2	0.000474	
Underfill					0.082000	0.395
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	Basis	0.016400	
	Phenolic Resin	Trade Secret	15.00	Basis	0.012300	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	Basis	0.004100	
	Amine type accelerator	Trade Secret	5.00	Basis	0.004100	
	Silicon Dioxide	60676-86-0	51.50	Basis	0.042230	
	Carbon Black	1333-86-4	1.00	Basis	0.000820	
	Additives	Trade Secret	2.50	Additive	0.002050	
Lid					9.724000	46.838
	Copper (Cu)	7440-50-8	99.12	Main Material	9.641346	
	Nickel (Ni)	7440-02-0	0.88	Main Material	0.082654	
Lid Adhesive					0.340000	1.638
	Aluminum Oxide Al2O3	1344-28-1	70.00	Basis	0.238000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Basis	0.102000	
Solder Ball					1.470244	7.082
	Tin (Sn)	7440-31-5	96.50	Main Material	1.418785	
	Silver (Ag)	7440-22-4	3.00	Main Material	0.044107	
	Copper (Cu)	7440-50-8	0.50	Main Material	0.007351	
Substrate					8.176955	39.386
	Copper (Cu)	7440-50-8	48.07	Main Material	3.930662	
	Tin (Sn)	7439-92-1	0.08	Main Material	0.006542	
	Lead (Pb)	7440-31-5	0.11	Main Material	0.008995	
	Silver (Ag)	7440-22-4	0.50	Main Material	0.040885	
	BT Core	7440-31-5	39.82	Main Material	3.256063	
	ABF	7440-50-8	10.41	Main Material	0.851221	
	Solder Mask	N/A	1.01	Main Material	0.082587	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
03/23/12	1.0	Initial Xilinx release.
10/26/12	1.1	Update substrate component

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