



# 100% Material Declaration Data Sheet for 7 Series FFG1157

PK556 (v1.1) November 23, 2012

**Average Weight: 13.6002g**

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
<b>Silicon Die</b>					<b>0.828955</b>	<b>6.095</b>
	Silicon (Si)	7440-21-3	100.00	Basis	0.828955	
<b>Solder Bump</b>					<b>0.038857</b>	<b>0.286</b>
	Tin (Sn)	7440-31-5	63.00	Basis	0.024480	
	Lead (Pb)	7439-92-1	37.00	Basis	0.014377	
<b>Solder Paste</b>					<b>0.011300</b>	<b>0.083</b>
	Tin (Sn)	7440-31-5	96.50	Basis	0.010905	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000339	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000057	
<b>Capacitor 1</b>					<b>0.041280</b>	<b>0.304</b>
	BaTiO3 type	12047-27-7	70.60	Ceramic	0.029144	
	Nickel (Ni)	7440-02-0	6.70	Inner electrode	0.002766	
	Copper (Cu)	7440-50-8	20.10	Outer electrode	0.008297	
	Nickel (Ni)	7440-02-0	0.80	Plating 1	0.000330	
	Tin (Sn)	7440-31-5	1.80	Plating 2	0.000743	
<b>Capacitor 2</b>					<b>0.015200</b>	<b>0.112</b>
	BaTiO3 type	12047-27-7	61.70	Ceramic	0.009378	
	Nickel (Ni)	7440-02-0	4.89	Inner electrode	0.000743	
	Indium tin oxide	50926-11-9	18.30	Outer electrode	0.002782	
	Copper (Cu)	7440-50-8	13.40	Outer electrode	0.002037	
	Nickel (Ni)	7440-02-0	0.49	Plating 1	0.000074	
	Tin (Sn)	7440-31-5	1.22	Plating 2	0.000185	
<b>Capacitor 3</b>					<b>0.003000</b>	<b>0.022</b>
	BaTiO3 type	12047-27-7	66.00	Ceramic	0.001980	
	Nickel (Ni)	7440-02-0	2.67	Inner electrode	0.000080	
	Copper (Cu)	7440-50-8	23.33	Outer electrode	0.000700	
	Nickel (Ni)	7440-02-0	2.33	Plating 1	0.000070	
	Tin (Sn)	7440-31-5	5.67	Plating 2	0.000170	

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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
<b>Capacitor 4</b>					<b>0.011160</b>	<b>0.082</b>
	BaTiO3 type	12047-27-7	51.10	Ceramic	0.005703	
	Nickel (Ni)	7440-02-0	27.00	Inner Electrode	0.003013	
	Copper (Cu)	7440-50-8	16.00	Outer Electrode	0.001786	
	Glass	65997-17-3	0.90		0.000100	
	Nickel (Ni)	7440-02-0	2.00	Plating1	0.000223	
	Tin (Sn)	7440-31-5	3.00	Plating2	0.000335	
<b>Underfill</b>					<b>0.082000</b>	<b>0.603</b>
	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	
<b>Lid</b>					<b>7.290000</b>	<b>53.602</b>
	Copper (Cu)	7440-50-8	99.15	Main Material	7.228035	
	Nickel (Ni)	7440-02-0	0.85	Main Material	0.061965	
<b>Lid Adhesive</b>					<b>0.215000</b>	<b>1.581</b>
	Aluminium Oxide Al2O3	1344-28-1	70.00	Main Material	0.150500	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main Material	0.064500	
<b>Solder Ball</b>					<b>0.964719</b>	<b>7.093</b>
	Tin (Sn)	7440-31-5	96.50	Main Material	0.930954	
	Silver (Ag)	7440-22-4	3.00	Main Material	0.028942	
	Copper (Cu)	7440-50-8	0.50	Main Material	0.004824	
<b>Substrate</b>					<b>4.098707</b>	<b>30.137</b>
	Copper (Cu)	7440-50-8	43.34		1.776380	
	Tin (Sn)	7440-31-5	1.16		0.047545	
	Lead (Pb)	7439-92-1	0.33		0.013526	
	Silver (Ag)	7440-22-4	0.02		0.000820	
	BT Core	N/A	38.40		1.573903	
	ABF	N/A	14.90		0.610707	
	Solder Mask	N/A	1.85		0.075826	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
03/23/2012	1.0	Initial Xilinx release.
11/23/2012	1.1	Update substrate component

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