



# 100% Material Declaration Data Sheet for 7 Series FFG1928

PK656 (v1.0) May 23, 2014

**Average Weight: 24.9750g**

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>3.319</b>
	Silicon (Si)	7440-21-3	100.00	Basis	0.828955	
<b>Solder Bump</b>					<b>0.038857</b>	<b>0.156</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>0.014100</b>	<b>0.056</b>
	Tin (Sn)	7440-31-5	96.50	Basis	0.013607	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000423	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000071	
<b>Capacitor 1</b>					<b>0.041280</b>	<b>0.165</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>0.061</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>0.012000</b>	<b>0.048</b>
	BaTiO3 type	12047-27-7	66.00	Ceramic	0.007920	
	Nickel (Ni)	7440-02-0	2.67	Inner electrode	0.000320	
	Copper (Cu)	7440-50-8	23.33	Outer electrode	0.002800	
	Nickel (Ni)	7440-02-0	2.33	Plating 1	0.000280	
	Tin (Sn)	7440-31-5	5.67	Plating 2	0.000680	

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<b>Capacitor 4</b>					<b>0.011160</b>	<b>0.045</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>0.328</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>14.214000</b>	<b>56.913</b>
	Copper (Cu)	7440-50-8	99.15	Main Material	14.093181	
	Nickel (Ni)	7440-02-0	0.85	Main Material	0.120819	
<b>Lid Adhesive</b>					<b>0.340000</b>	<b>1.361</b>
	Aluminium Oxide Al2O3	1344-28-1	70.00	Main Material	0.238000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main Material	0.102000	
<b>Solder Ball</b>					<b>1.607244</b>	<b>6.435</b>
	Tin (Sn)	7440-31-5	96.50	Main Material	1.550990	
	Silver (Ag)	7440-22-4	3.00	Main Material	0.048217	
	Copper (Cu)	7440-50-8	0.50	Main Material	0.008036	
<b>Substrate</b>					<b>7.770204</b>	<b>31.112</b>
	Copper (Cu)	7440-50-8	44.97		3.494261	
	Tin (Sn)	7440-31-5	0.08		0.006216	
	Lead (Pb)	7439-92-1	0.11		0.008547	
	Silver (Ag)	7440-22-4	0.52		0.040405	
	BT Core	N/A	43.68		3.394025	
	ABF	N/A	9.53		0.740501	
	Solder Mask	N/A	1.11		0.086249	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
05/23/2014	1.0	Initial Xilinx release

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