



# 100% Material Declaration Data Sheet for Virtex<sup>®</sup>-7 Device FFG1926 Package

PK606 (v1.0) May 24, 2013

**Average Weight: 25.7005g**

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>0.893576</b>	<b>3.477</b>
	Silicon (Si)	7440-21-3	100.00	Basis	0.893576	
<b>Solder Bump</b>					<b>0.043347</b>	<b>0.169</b>
	Tin (Sn)	7440-31-5	63.00	Basis	0.027309	
	Lead (Pb)	7439-92-1	37.00	Basis	0.016038	
<b>Solder Paste</b>					<b>0.015400</b>	<b>0.060</b>
	Tin (Sn)	7440-31-5	96.50	Basis	0.014861	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000462	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000077	
<b>Capacitor 1</b>					<b>0.041280</b>	<b>0.161</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>0.022800</b>	<b>0.089</b>
	BaTiO3 type	12047-27-7	61.70	Ceramic	0.014068	
	Nickel (Ni)	7440-02-0	4.89	Inner Electrode	0.001115	
	Indium tin oxide	50926-11-9	18.30	Outer Electrode	0.004172	
	Copper (Cu)	7440-50-8	13.40	Outer Electrode	0.003055	
	Nickel (Ni)	7440-02-0	0.49	Plating1	0.000112	
	Tin (Sn)	7440-31-5	1.22	Plating2	0.000278	
<b>Capacitor 3</b>					<b>0.009600</b>	<b>0.037</b>
	BaTiO3 type	12047-27-7	66.00	Ceramic	0.006336	
	Nickel (Ni)	7440-02-0	2.67	Inner Electrode	0.000256	
	Copper (Cu)	7440-50-8	23.33	Outer Electrode	0.002240	
	Nickel (Ni)	7440-02-0	2.33	Plating1	0.000224	
	Tin (Sn)	7440-31-5	5.67	Plating2	0.000544	

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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>0.013950</b>	<b>0.054</b>
	BaTiO3 type	12047-27-7	51.10	Ceramic	0.007128	
	Nickel (Ni)	7440-02-0	27.00	Inner Electrode	0.003767	
	Copper (Cu)	7440-50-8	16.00	Outer Electrode	0.002232	
	Glass	65997-17-3	0.90		0.000126	
	Nickel (Ni)	7440-02-0	2.00	Plating1	0.000279	
	Tin (Sn)	7440-31-5	3.00	Plating2	0.000419	
<b>Underfill</b>					<b>0.093450</b>	<b>0.364</b>
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	Basis	0.018690	
	Phenolic Resin	Trade Secret	15.00	Basis	0.014018	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	Basis	0.004673	
	Amine type accelerator	Trade Secret	5.00	Basis	0.004673	
	Silicon Dioxide	60676-86-0	51.50	Basis	0.048127	
	Carbon Black	1333-86-4	1.00	Basis	0.000935	
	Additives	Trade Secret	2.50	Additive	0.002336	
<b>Lid</b>					<b>14.214000</b>	<b>55.306</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>0.357000</b>	<b>1.389</b>
	Aluminium Oxide Al2O3	1344-28-1	70.00	Main Material	0.249900	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main Material	0.107100	
<b>Solder Ball</b>					<b>1.607244</b>	<b>6.254</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>8.388855</b>	<b>32.641</b>
	Copper (Cu)	7440-50-8	47.90		4.018104	
	Tin (Sn)	7440-31-5	0.08		0.006850	
	Lead (Pb)	7439-92-1	0.11		0.009525	
	Silver (Ag)	7440-22-4	0.48		0.040376	
	BT Core	N/A	40.01		3.356460	
	ABF	N/A	10.40		0.872310	
	Solder Mask	N/A	1.02		0.085230	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
05/24/2013	1.0	Initial Xilinx release

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