



# 100% Material Declaration Data Sheet for FFV676

PK714 (v1.0) Aug 28, 2015

**Average Weight: 7.8679 g**

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>0.296758</b>	<b>3.772%</b>
	Silicon (Si)	7440-21-3	100.00	Basis	0.296758	
<b>Solder Bump</b>					<b>0.011910</b>	<b>0.151%</b>
	Sn	7440-31-5	98.20	basis	0.011696	
	Ag	7440-22-4	1.80	basis	0.000214	
<b>Solder Paste</b>					<b>0.004956</b>	<b>0.063%</b>
	Tin (Sn)	7440-31-5	96.50	Basis	0.004783	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000149	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000025	
<b>Capacitor 1</b>					<b>0.001200</b>	<b>0.015%</b>
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.000363	
	Titanium dioxide	13463-67-7	15.11		0.000181	
	Misc.	trade secret	5.04		0.000060	
	Ni	7440-02-0	33.44	Inner electrode	0.000401	
	Cu	7440-50-8	11.87	Out electrode	0.000142	
	Silicon dioxide	7631-86-9	1.06		0.000013	
	boric oxide	1303-86-2	0.26		0.000003	
	Ni	7440-02-0	0.81	Plating1	0.000010	
	Sn	7440-31-5	2.19	Plating2	0.000026	
<b>Capacitor 2</b>					<b>0.003800</b>	<b>0.048%</b>
	BaTiO3 type	1304-28-5	37.01	Ceramic	0.001406	
	Titanium dioxide	13463-67-7	18.51		0.000703	
	Misc.	-	6.17		0.000234	
	Ni	7440-02-0	4.90	Inner Electrode	0.000186	
	Cu	7440-50-8	9.15	Outer Electrode	0.000348	
	Indium(III) oxide	1312-43-2	1.83		0.000070	
	Tin dioxide	18282-10-5	5.49		0.000209	
	Frits	65997-18-4	1.83		0.000070	
	Nickel	7440-02-0	12.05		0.000458	
	Silicon dioxide	7631-86-9	0.27		0.000010	
	boric oxide	1303-86-2	1.07		0.000041	
	Ni	7440-02-0	0.49	Plating1	0.000019	
	Sn	7440-31-5	1.23	Plating2	0.000047	

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<b>Capacitor 3</b>					<b>0.007360</b>	<b>0.094%</b>
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.002331	
	Titanium dioxide	13463-67-7	15.83		0.001165	
	Misc.	-	5.28		0.000389	
	Ni	7440-02-0	26.67	Inner Electrode	0.001963	
	Cu	7440-50-8	15.10	Outer Electrode	0.001111	
	Silicon dioxide	7631-86-9	1.34		0.000099	
	boric oxide	1303-86-2	0.33		0.000024	
	Ni	7440-02-0	1.00	Plating1	0.000074	
	Sn	7440-31-5	2.78	Plating2	0.000205	
<b>Capacitor 4</b>					<b>0.021600</b>	<b>0.275%</b>
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.006841	
	Titanium dioxide	13463-67-7	15.83		0.003419	
	Misc.	-	5.28		0.001140	
	Ni	7440-02-0	26.67	Inner Electrode	0.005761	
	Cu	7440-50-8	15.10	Outer Electrode	0.003262	
	Silicon dioxide	7631-86-9	1.34		0.000289	
	boric oxide	1303-86-2	0.33		0.000071	
	Ni	7440-02-0	1.00	Plating1	0.000216	
	Sn	7440-31-5	2.78	Plating2	0.000600	
<b>Underfill</b>					<b>0.045000</b>	<b>0.572%</b>
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.006750	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.004500	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.002250	
	Amine type hardener	trade secret	10.00	basis	0.004500	
	Silicon dioxide	60676-86-0	58.00	filler	0.026100	
	Carbon black	1333-86-4	1.00	color agent	0.000450	
	Additives	trade secret	1.00	additives	0.000450	
<b>Lid</b>					<b>4.600300</b>	<b>58.47%</b>
	Cu	7440-50-8	98.35	Main material	4.524395	
	Ni	7440-02-0	1.65	Main material	0.075905	
<b>Lid Adhesive</b>					<b>0.105000</b>	<b>1.335%</b>
	Aluminium Oxide Al2O3	-	80.00	Main material	0.084000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.021000	

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
<b>Solder Ball</b>					<b>0.564707</b>	<b>7.177%</b>
	Sn	7440-31-5	96.50	basis	0.544942	
	Ag	7440-22-4	3.00	basis	0.016941	
	Cu	7440-50-8	0.50	basis	0.002824	
<b>Substrate</b>					<b>2.205347</b>	<b>28.030%</b>
	Cu	7440-50-8	40.13		0.885096	
	Sn	7440-31-5	1.00		0.022050	
	Ag	7440-22-4	0.03		0.000685	
	Core	trade secret	43.15		0.951560	
	ABF	trade secret	13.47		0.297084	
	Solder Mask	trade secret	2.22		0.048872	

## Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
08/28/2015	1.0	Initial Xilinx release.

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