



PK830(v1.0) November 30, 2016

**100% Material Declaration Data Sheet for ZYNQ FFG900 RoHS 6/6**

**Average Weight : 11.7655 g**

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight ( in grams)	Component % of total
Silicon die					<b>0.420852</b>	<b>3.577%</b>
	Silicon	7440-21-3	100.00	basis	0.420852	
Bump					<b>0.016857</b>	<b>0.143%</b>
	Tin	7440-31-5	98.20	basis	0.016554	
	Silver	7440-22-4	1.80	basis	0.000303	
Underfill					<b>0.055650</b>	<b>0.473%</b>
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.008348	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.005565	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.002783	
	Amine type hardener	trade secret	10.00	basis	0.005565	
	Silicon dioxide	60676-86-0	58.00	filler	0.032277	
	Carbon black	1333-86-4	1.00	color agent	0.000557	
Solder paste					<b>0.005888</b>	<b>0.050%</b>
	Tin	7440-31-5	96.50	metal	0.005682	
	Silver	7440-22-4	3.00	metal	0.000177	
	Copper	7440-50-8	0.50	metal	0.000029	
Capacitor 1					<b>0.002400</b>	<b>0.020%</b>
	BaTiO3 type	1304-28-5	40.00	Ceramic	0.000960	
	Titanium dioxide	13463-67-7	20.00		0.000480	
	Misc	-	6.67		0.000160	
	Nickel	7440-02-0	2.42	Inner electrode	0.000058	
	Copper	7440-50-8	20.73	Out electrode	0.000498	
	Silicon dioxide	7631-86-9	1.85		0.000044	
	diboron trioxide; boric oxide	1303-86-2	0.45		0.000011	
	Nickel	7440-02-0	2.12	Plating1	0.000051	
	Tin	7440-31-5	5.76	Plating2	0.000138	
Capacitor2					<b>0.008280</b>	<b>0.070%</b>
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.002622	
	Titanium dioxide	13463-67-7	15.83		0.001311	
	Misc	-	5.28		0.000437	
	Nicke;	7440-02-0	26.67	Inner Electrode	0.002208	
	Copper	7440-50-8	15.10	Outer Electrode	0.001250	
	Silicon dioxide	7631-86-9	1.34		0.000111	
	diboron trioxide; boric oxide	1303-86-2	0.33		0.000027	
	Nickel	7440-02-0	1.00	Plating1	0.000083	
	Tin	7440-31-5	2.78	Plating2	0.000230	
Capacitor3					<b>0.025200</b>	<b>0.214%</b>
	BaTiO3 type	1304-28-5	37.46	Ceramic	0.009440	
	Titanium dioxide	13463-67-7	18.73		0.004720	
	Misc	-	6.24		0.001572	
	Nickel	7440-02-0	17.95	Inner Electrode	0.004523	
	Copper	7440-50-8	15.88	Outer Electrode	0.004002	
	Silicon dioxide	7631-86-9	1.41		0.000355	
	diboron trioxide; boric oxide	1303-86-2	0.35		0.000088	
	Nickel	7440-02-0	0.54	Plating1	0.000136	
	Tin	7440-31-5	1.44	Plating2	0.000363	
Capacitor4					<b>0.003800</b>	<b>0.032%</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	
	Indium(III) oxide	1312-43-2	9.15		0.000348	
	Tin dioxide	18282-10-5	1.83		0.000070	
	Frits	65997-18-4	5.49		0.000209	
	Nickel	7440-02-0	1.83		0.000070	
	Copper	7440-50-8	12.05	Outer Electrode	0.000458	
	Silicon dioxide	7631-86-9	0.27		0.000010	
	diboron trioxide; boric oxide	1303-86-2	1.07		0.000041	
	Nickel	7440-02-0	0.49	Plating1	0.000019	
Tin	7440-31-5	1.23	Plating2	0.000047		
Heat sink					<b>7.449100</b>	<b>63.313%</b>
	Copper	7440-50-8	98.35	Main material	7.326190	
	Nickel	7440-02-0	1.65	Main material	0.122910	
Heat sink adhesive					<b>0.159600</b>	<b>1.357%</b>
	Aluminium Oxide Al2O3	-	80.00	Main material	0.127680	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.031920	
Solder ball					<b>0.751829</b>	<b>6.390%</b>
	Tin	7440-31-5	96.50	Main material	0.725515	
	Silver	7440-22-4	3.00	Main material	0.022555	
	Copper	7440-50-8	0.50	Main material	0.003759	
Substrate					<b>2.866044</b>	<b>24.360%</b>
	Copper	7440-50-8	41.44		1.187688	
	Tin	7440-31-5	1.04		0.029807	
	Silver	7440-22-4	0.03		0.000860	
	Core	N/A	42.43		1.216062	
	ABF	N/A	12.95		0.371153	
	Solder Mask	N/A	2.11		0.060474	

**Revision History**

Date	Version	Description of Revisions
11/30/2016	1.0	Initial Xilinx release.