



PK840(v1.0) November 30, 2016

100% Material Declaration Data Sheet for Virtex-6 FFG1759 RoHS 6/6

Average Weight : 20.3250 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					0.505205	2.486%
	Silicon	7440-21-3	100.00	basis	0.505205	
Bump					0.019371	0.095%
	Tin	7440-31-5	98.20	basis	0.019022	
	Silver	7440-22-4	1.80	basis	0.000349	
Underfill					0.068300	0.336%
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.010245	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.006830	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.003415	
	Amine type hardener	trade secret	10.00	basis	0.006830	
	Silicon dioxide	60676-86-0	58.00	filler	0.039614	
	Carbon black	1333-86-4	1.00	color agent	0.000683	
	Additives	trade secret	1.00	additives	0.000683	
Solder paste					0.009656	0.048%
	Tin	7440-31-5	96.50	metal	0.009318	
	Silver	7440-22-4	3.00	metal	0.000290	
	Copper	7440-50-8	0.50	metal	0.000048	
Capacitor 1					0.000300	0.001%
	BaTiO3 type	1304-28-5	40.00	Ceramic	0.000120	
	Titanium dioxide	13463-67-7	20.00		0.000060	
	Misc	-	6.67		0.000020	
	Nickel	7440-02-0	2.42	Inner electrode	0.000007	
	Copper	7440-50-8	20.73	Out electrode	0.000062	
	Silicon dioxide	7631-86-9	1.85		0.000006	
	diboron trioxide; boric oxide	1303-86-2	0.45		0.000001	
	Nickel	7440-02-0	2.12	Plating1	0.000006	
	Tin	7440-31-5	5.76	Plating2	0.000017	
Capacitor2					0.006880	0.034%
	BaTiO3 type	1304-28-5	34.54	Ceramic	0.002376	
	Titanium dioxide	13463-67-7	17.27		0.001188	
	Misc	-	5.76		0.000396	
	Nickel	7440-02-0	31.90	Inner Electrode	0.002195	
	Copper	7440-50-8	8.52	Outer Electrode	0.000586	
	Silicon dioxide	7631-86-9	0.76		0.000052	
	diboron trioxide; boric oxide	1303-86-2	0.19		0.000013	
	Nickel	7440-02-0	0.29	Plating1	0.000020	
Tin	7440-31-5	0.77	Plating2	0.000053		
Capacitor3					0.003600	0.018%
	BaTiO3 type	1304-28-5	37.46	Ceramic	0.001349	
	Titanium dioxide	13463-67-7	18.73		0.000674	
	Misc	-	6.24		0.000225	
	Nickel	7440-02-0	17.95	Inner Electrode	0.000646	
	Copper	7440-50-8	15.88	Outer Electrode	0.000572	
	Silicon dioxide	7631-86-9	1.41		0.000051	
	diboron trioxide; boric oxide	1303-86-2	0.35		0.000013	
Nickel	7440-02-0	0.54	Plating1	0.000019		
Tin	7440-31-5	1.44	Plating2	0.000052		
Heat sink					12.090000	59.483%
	Copper	7440-50-8	98.35	Main material	11.890515	
	Nickel	7440-02-0	1.65	Main material	0.199485	
Heat sink adhesive					0.175000	0.861%
	Aluminium Oxide Al2O3	-	80.00	Main material	0.140000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.035000	
Solder ball					1.470244	7.234%
	Tin	7440-31-5	96.50	Main material	1.418785	
	Silver	7440-22-4	3.00	Main material	0.044107	
	Copper	7440-50-8	0.50	Main material	0.007351	
Substrate					5.976444	29.404%
	Copper	7440-50-8	33.08		1.977009	
	Tin	7440-31-5	0.64		0.038249	
	Silver	7440-22-4	0.05		0.002988	
	Resin	N/A	0.10		0.005976	
	Core	N/A	41.89		2.503532	
	PP	N/A	5.49		0.328107	
ABF	N/A	17.04		1.018386		
	Solder Mask	N/A	1.71		0.102197	

Revision History

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