



PK836(v1.0) November 30, 2016

100% Material Declaration Data Sheet for Virtex-6 FFG484 RoHS 6/6

Average Weight : 4.0200 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					0.340108	8.460%
	Silicon	7440-21-3	100.00	basis	0.340108	
Bump					0.013003	0.323%
	Tin	7440-31-5	98.20	basis	0.012769	
	Silver	7440-22-4	1.80	basis	0.000234	
Underfill					0.052300	1.301%
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.007845	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.005230	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.002615	
	Amine type hardener	trade secret	10.00	basis	0.005230	
	Silicon dioxide	60676-86-0	58.00	filler	0.030334	
	Carbon black	1333-86-4	1.00	color agent	0.000523	
	Additives	trade secret	1.00	additives	0.000523	
					0.004768	0.119%
Solder paste						
	Tin	7440-31-5	96.50	metal	0.004601	
	Silver	7440-22-4	3.00	metal	0.000143	
	Copper	7440-50-8	0.50	metal	0.000024	
					0.000300	0.007%
Capacitor 1						
	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	
					0.003800	0.095%
Capacitor2						
	BaTiO3 type	1304-28-5	39.32	Ceramic	0.001494	
	Titanium dioxide	13463-67-7	19.67		0.000747	
	Misc	-	6.56		0.000249	
	Nickel	7440-02-0	19.08	Inner Electrode	0.000725	
	Copper	7440-50-8	12.44	Outer Electrode	0.000473	
	Silicon dioxide	7631-86-9	1.11		0.000042	
	diboron trioxide; boric oxide	1303-86-2	0.28		0.000011	
	Nickel	7440-02-0	0.41	Plating1	0.000016	
	Tin	7440-31-5	1.13	Plating2	0.000043	
					0.003600	0.090%
Capacitor3						
	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	
					2.170000	53.980%
Heat sink						
	Copper	7440-50-8	98.35	Main material	2.134195	
	Nickel	7440-02-0	1.65	Main material	0.035805	
					0.093000	2.313%
Heat sink adhesive	Aluminium Oxide Al2O3	-	80.00	Main material	0.074400	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.018600	
					0.404317	10.058%
Solder ball						
	Tin	7440-31-5	96.50	Main material	0.390166	
	Silver	7440-22-4	3.00	Main material	0.012130	
	Copper	7440-50-8	0.50	Main material	0.002022	
					0.934804	23.254%
Substrate						
	Copper	7440-50-8	27.79		0.259781	
	Tin	7440-31-5	1.77		0.016546	
	Silver	7440-22-4	0.14		0.001309	
	Resin	N/A	0.16		0.001496	
	Core	N/A	51.33		0.479835	
	ABF	N/A	15.53		0.145175	
Solder Mask	N/A	3.28		0.030662		

Revision History

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