



100% Material Declaration Data Sheet for UltraScale FFVB1760

PK702 (v1.0) April 3, 2015

Average Weight: 22.1944g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die					0.731163	3.294%
	Silicon (Si)	7440-21-3	100.00	Basis	0.731163	
Bump					0.033493	0.151%
	Tin (Sn)	7440-31-5	98.20	metal	0.032890	
	Silver (Ag)	7440-22-4	1.80	metal	0.000603	
Underfill					0.105000	0.473%
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.015750	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.010500	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.005250	
	Amine type hardener	trade secret	10.00	basis	0.010500	
	Silicon dioxide	60676-86-0	58.00	filler	0.060900	
	Carbon black	1333-86-4	1.00	color agent	0.001050	
	Additives	trade secret	1.00	additives	0.001050	
Solder Paste					0.015040	0.068%
	Tin (Sn)	7440-31-5	96.50	metal	0.014514	
	Silver (Ag)	7440-22-4	3.00	metal	0.000451	
	Copper (Cu)	7440-50-8	0.50	metal	0.000075	
Capacitor 1					0.051200	0.231%
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.015473	
	Titanium Dioxide	13463-67-7	15.11		0.007736	
	Misc.	N/A	5.04		0.002580	
	Nickel (Ni)	7440-02-0	33.44	Inner electrode	0.017121	
	Copper (Cu)	7440-50-8	11.87	Out electrode	0.006077	
	Silicon Dioxide	7631-86-9	1.06		0.000543	
	Diboron trioxide	1303-86-2	0.26		0.000133	
	Nickel (Ni)	7440-02-0	0.81	Plating1	0.000415	
	Tin (Sn)	7440-31-5	2.19	Plating2	0.001121	

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Capacitor 2					0.012644	0.057%
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.004004	
	Titanium dioxide	13463-67-7	15.83		0.002002	
	Misc	-	5.28		0.000668	
	Nickel (Ni)	7440-02-0	26.67	Inner Electrode	0.003372	
	Copper (Cu)	7440-50-8	15.10	Outer Electrode	0.001909	
	Silicon dioxide	7631-86-9	1.34		0.000169	
	Diboron trioxide	1303-86-2	0.33		0.000042	
	Nickel (Ni)	7440-02-0	1.00	Plating1	0.000126	
	Tin (Sn)	7440-31-5	2.78	Plating2	0.000352	
Lid					12.240000	55.149%
	Copper (Cu)	7440-50-8	98.35	Main material	12.038040	
	Nickel (Ni)	8049-31-8	1.65	Main material	0.201960	
Lid Adhesive					0.300000	1.352%
	Aluminium Oxide Al2O3	trade secret	80.00	Main material	0.240000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.060000	
Solder Ball					1.470244	6.624%
	Tin (Sn)	7440-31-5	96.50	Main material	1.418785	
	Silver (Ag)	7440-22-4	3.00	Main material	0.044107	
	Copper (Cu)	7440-50-8	0.50	Main material	0.007351	
Substrate					7.235650	32.601%
	Copper (Cu)	7440-50-8	39.03		2.824396	
	Tin (Sn)	7440-31-5	0.66		0.047887	
	Lead (Pb)	7439-92-1	0.00		0.000007	
	Silver (Ag)	7440-22-4	0.02		0.001489	
	BT Core	N/A	42.31		3.061228	
	ABF	N/A	16.47		1.191614	
Solder Mask	N/A	1.51		0.109030		

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
4/3/2015	1.0	Initial Xilinx release

Notice of Disclaimer

Xilinx regards this materials data to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Xilinx subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers (“Contractors”). All data provided hereunder is based on information received from Contractors. Xilinx has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Xilinx products.