XILINX.

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100% Material Declaration Data Sheet for Ultrascale+ & Zynq Ultrascale+ FBVB900

Average Weight : 5.1033 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.405437**	**7.945%**
	Silicon	7440-21-3	100.00	basis	0.405437	
Bump					**0.018197**	**0.357%**
	Tin	7440-31-5	98.20	basis	0.017869	
	Silver	7440-22-4	1.80	basis	0.000328	
Underfill					**0.056600**	**1.109%**
	Bisphenol F type liquid	9003-36-5	15.00	basis	0.008490	
	1,6-Bis(2,3-	27610-48-6	10.00	basis	0.005660	
	Bisphenol A type liquid	25068-38-6	5.00	basis	0.002830	
	Amine type hardener	trade secret	10.00	basis	0.005660	
	Silicon dioxide	60676-86-0	58.00	filler	0.032828	
	Carbon black	1333-86-4	1.00	color agent	0.000566	
	Additives	trade secret	1.00	additives	0.000566	
Solder paste					**0.008480**	**0.166%**
	Tin	7440-31-5	85.40	metal	0.007242	
	Silver	7440-22-4	2.66	metal	0.000226	
	Copper	7440-50-8	0.44	metal	0.000037	
	Additives	trade secret	11.50	flux	0.000975	
Capacitor 1					**0.001200**	**0.024%**
	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	
	Nickel	7440-02-0	33.44	Inner electrode	0.000401	
	Copper	7440-50-8	11.87	Out electrode	0.000142	
	Silicon dioxide	7631-86-9	1.06		0.000013	
	diboron trioxide; boric	1303-86-2	0.26		0.000003	
	NIckel	7440-02-0	0.81	Plating1	0.000010	
	Tin	7440-31-5	2.19	Plating2	0.000026	
Capacitor 2					**0.000920**	**0.018%**
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.000291	
	Titanium dioxide	13463-67-7	15.83		0.000146	
	Misc	trade secret	5.28		0.000049	
	Nickel	7440-02-0	26.67	Inner electrode	0.000245	
	Copper	7440-50-8	15.10	Out electrode	0.000139	
	Silicon dioxide	7631-86-9	1.34		0.000012	
	diboron trioxide; boric	1303-86-2	0.33		0.000003	
	NIckel	7440-02-0	1.00	Plating1	0.000009	
	Tin	7440-31-5	2.78	Plating2	0.000026	
Solder ball					**0.751829**	**14.732%**
	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					**3.860637**	**75.650%**
	Copper	7440-50-8	43.38		1.674744	
	Tin	7440-31-5	0.45		0.017373	
	Silver	7440-22-4	0.01		0.000386	
	Resin	N/A	0.12		0.004633	
	Core	N/A	38.78		1.497155	
	ABF	N/A	16.14		0.623107	
	Solder Mask	N/A	1.12		0.043239	

Revision History

Date	Version	Description of Revisions
10/25/2017	1.0	Initial Xilinx Release.

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