XILINX

PK786 (v1.0) Apr 1, 2016

100% Material Declaration Data Sheet for FFVB2104

Average Weight : 32.5513 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.731163**	**2.246%**
	Si	7440-21-3	100.00	basis	0.731163	
Bump					**0.028328**	**0.087%**
	Sn	7440-31-5	98.20	basis	0.027818	
	Ag	7440-22-4	1.80	basis	0.000510	
Underfill					**0.078000**	**0.240%**
	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.011700	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.007800	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.003900	
	Amine type hardener	trade secret	10.00	basis	0.007800	
	Silicon dioxide	60676-86-0	58.00	filler	0.045240	
	Carbon black	1333-86-4	1.00	color agent	0.000780	
	Additives	trade secret	1.00	additives	0.000780	
Solder paste					**0.018432**	**0.057%**
	Sn	7440-31-5	96.50	metal	0.017787	
	Ag	7440-22-4	3.00	metal	0.000553	
	Cu	7440-50-8	0.50	metal	0.000092	
Capacitor 1					**0.048000**	**0.147%**
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.014506	
	Titanium dioxide	13463-67-7	15.11		0.007253	
	Misc	-	5.04		0.002419	
	Ni	7440-02-0	33.44	Inner electrode	0.016051	
	Cu	7440-50-8	11.87	Out electrode	0.005698	
	Silicon dioxide	7631-86-9	1.06		0.000509	
	diboron trioxide; boric oxide	1303-86-2	0.26		0.000125	
	Ni	7440-02-0	0.81	Plating1	0.000389	
	Sn	7440-31-5	2.19	Plating2	0.001051	
Capacitor2					**0.024840**	**0.076%**
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.007867	
	Titanium dioxide	13463-67-7	15.83		0.003932	
	Misc	-	5.28		0.001312	
	Ni	7440-02-0	26.67	Inner Electrode	0.006625	
	Cu	7440-50-8	15.10	Outer Electrode	0.003751	
	Silicon dioxide	7631-86-9	1.34		0.000333	
	diboron trioxide; boric oxide	1303-86-2	0.33		0.000082	
	Ni	7440-02-0	1.00	Plating1	0.000248	
	Sn	7440-31-5	2.78	Plating2	0.000691	
Lid					**20.237200**	**62.170%**
	Cu	7440-50-8	98.35	Main material	19.903286	
	Ni	7440-02-0	1.65	Main material	0.333914	
Lid Adhesive					**0.255000**	**0.783%**
	Aluminium Oxide Al2O3	-	80.00	Main material	0.204000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.051000	
Solder ball					**1.757610**	**5.400%**
	Sn	7440-31-5	96.50	Main material	1.696094	
	Ag	7440-22-4	3.00	Main material	0.052728	
	Cu	7440-50-8	0.50	Main material	0.008788	
Substrate					**9.372727**	**28.794%**
	Cu	7440-50-8	39.80		3.730345	
	Sn	7440-31-5	0.65		0.060923	
	Ag	7440-22-4	0.02		0.001875	
	BT Core	N/A	41.88		3.925298	
	ABF	N/A	16.21		1.519319	
	Solder Mask	N/A	1.44		0.134967	

Revision History

Date	Version	Description of Revisions
04/01/2016	1	Initial Xilinx release.

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