



100% Material Declaration Data Sheet for FFVA2104

PK784 (v1.0) Mar 18, 2016

Average Weight : 32.3533 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die	Si	7440-21-3	100.00	basis	0.731163	2.260%
Bump	Sn	7440-31-5	98.20	basis	0.028328	0.088%
	Ag	7440-22-4	1.80	basis	0.027818	
					0.000510	
Underfill	Bisphenol F type liquid epoxy	9003-36-5	15.00	basis	0.078000	0.241%
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.011700	
	Bisphenol A type liquid epoxy	25068-38-6	5.00	basis	0.007800	
	Amine type hardener	trade secret	10.00	basis	0.003900	
	Silicon dioxide	60676-86-0	58.00	filler	0.007800	
	Carbon black	1333-86-4	1.00	color agent	0.045240	
	Additives	trade secret	1.00	additives	0.000780	
					0.000780	
Solder paste	Sn	7440-31-5	96.50	metal	0.017728	0.055%
	Ag	7440-22-4	3.00	metal	0.017108	
	Cu	7440-50-8	0.50	metal	0.000532	
Capacitor 1					0.000089	
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.040800	0.126%
	Titanium dioxide	13463-67-7	15.11		0.012330	
	Misc	-	5.04		0.006165	
	Ni	7440-02-0	33.44	Inner electrode	0.002056	
	Cu	7440-50-8	11.87	Out electrode	0.013644	
	Silicon dioxide	7631-86-9	1.06		0.004843	
	diboron trioxide; boric oxide	1303-86-2	0.26		0.000432	
	Ni	7440-02-0	0.81	Plating1	0.000106	
	Sn	7440-31-5	2.19	Plating2	0.000330	
					0.000894	
Capacitor2					0.028520	0.088%
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.009032	
	Titanium dioxide	13463-67-7	15.83		0.004515	
	Misc	-	5.28		0.001506	
	Ni	7440-02-0	26.67	Inner Electrode	0.007606	
	Cu	7440-50-8	15.10	Outer Electrode	0.004307	
	Silicon dioxide	7631-86-9	1.34		0.000382	
	diboron trioxide; boric oxide	1303-86-2	0.33		0.000094	
	Ni	7440-02-0	1.00	Plating1	0.000285	
	Sn	7440-31-5	2.78	Plating2	0.000793	
					0.000793	
Lid					20.136700	62.240%
	Cu	7440-50-8	98.35	Main material	19.804444	
	Ni	7440-02-0	1.65	Main material	0.332256	
Lid Adhesive					0.255000	0.788%
	Aluminium Oxide Al2O3	-	80.00	Main material	0.204000	
Solder ball	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.051000	
	Sn	7440-31-5	96.50	Main material	1.757610	5.433%
	Ag	7440-22-4	3.00	Main material	1.696094	
	Cu	7440-50-8	0.50	Main material	0.052728	
Substrate					0.008788	
	Cu	7440-50-8	43.33		9.279451	28.682%
	Sn	7440-31-5	0.53		4.020786	
	Ag	7440-22-4	0.02		0.049181	
	BT Core	N/A	36.28		0.001856	
	ABF	N/A	18.58		3.366585	
	Solder Mask	N/A	1.26		1.724122	
				0.116921		

Revision History

Date	Version	Description of Revisions
03/18/2016	1	Initial Xilinx release.

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