



100% Material Declaration Data Sheet for FFVC2104

PK782 (v1.0) Mar 18, 2016

Average Weight : 34.1433 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	2.141%	
Bump	Sn	7440-31-5	98.20	basis	0.028328	0.083%	
	Ag	7440-22-4	1.80	basis	0.000510		
					0.078000	0.228%	
Underfill	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	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		
					0.015808	0.046%	
Solder paste	Sn	7440-31-5	96.50	metal	0.015255		
	Ag	7440-22-4	3.00	metal	0.000474		
	Cu	7440-50-8	0.50	metal	0.000079		
Capacitor 1					0.045600	0.134%	
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.013780		
	Titanium dioxide	13463-67-7	15.11		0.006890		
	Misc	-	5.04		0.002298		
	Ni	7440-02-0	33.44	Inner electrode	0.015249		
	Cu	7440-50-8	11.87	Out electrode	0.005413		
	Silicon dioxide	7631-86-9	1.06		0.000483		
	diboron trioxide; boric oxide	1303-86-2	0.26		0.000119		
	Ni	7440-02-0	0.81	Plating1	0.000369		
	Sn	7440-31-5	2.19	Plating2	0.000999		
					0.017480	0.051%	
	Capacitor2	BaTiO3 type	1304-28-5	31.67	Ceramic	0.005536	
		Titanium dioxide	13463-67-7	15.83		0.002767	
Misc		-	5.28		0.000923		
Ni		7440-02-0	26.67	Inner Electrode	0.004662		
Cu		7440-50-8	15.10	Outer Electrode	0.002639		
Silicon dioxide		7631-86-9	1.34		0.000234		
diboron trioxide; boric oxide		1303-86-2	0.33		0.000058		
Ni		7440-02-0	1.00	Plating1	0.000175		
Sn		7440-31-5	2.78	Plating2	0.000486		
					20.130000	58.957%	
Lid	Cu	7440-50-8	98.35	Main material	19.797855		
	Ni	7440-02-0	1.65	Main material	0.332145		
Lid Adhesive					0.255000	0.747%	
	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	5.148%	
	Ag	7440-22-4	3.00	Main material	1.696094		
Substrate	Cu	7440-50-8	0.50	Main material	0.052728		
					0.008788		
					11.084311	32.464%	
	Cu	7440-50-8	43.33		4.802832		
	Sn	7440-31-5	0.53		0.058747		
	Ag	7440-22-4	0.02		0.002217		
	BT Core	N/A	36.28		4.021388		
ABF	N/A	18.58		2.059465			
Solder Mask	N/A	1.26		0.139662			

Revision History

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

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