XILINX

PK718 (v1.0) Aug 28, 2015

100% Material Declaration Data Sheet for FFV1156

Average Weight: 14.3584g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die					**0.446519**	**3.110%**
	Silicon (Si)	7440-21-3	100.00	Basis	0.446519	
Solder Bump					**0.018109**	**0.126%**
	Sn	7440-31-5	98.20	basis	0.017783	
	Ag	7440-22-4	1.80	basis	0.000326	
Solder Paste					**0.005496**	**0.038%**
	Tin (Sn)	7440-31-5	96.50	Basis	0.005304	
	Silver (Ag)	7440-22-4	3.00	Basis	0.000165	
	Copper (Cu)	7440-50-8	0.50	Basis	0.000027	
Capacitor 1					**0.004800**	**0.033%**
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.001451	
	Titanium dioxide	13463-67-7	15.11		0.000725	
	Misc.	trade secret	5.04		0.000242	
	Ni	7440-02-0	33.44	Inner electrode	0.001605	
	Cu	7440-50-8	11.87	Out electrode	0.000570	
	Silicon dioxide	7631-86-9	1.06		0.000051	
	boric oxide	1303-86-2	0.26		0.000012	
	Ni	7440-02-0	0.81	Plating1	0.000039	
	Sn	7440-31-5	2.19	Plating2	0.000105	
Capacitor 2					**0.007360**	**0.051%**
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.002331	
	Titanium dioxide	13463-67-7	15.83		0.001165	
	Misc.	-	5.28		0.000389	
	Ni	7440-02-0	26.67	Inner Electrode	0.001963	
	Cu	7440-50-8	15.10	Outer Electrode	0.001111	
	Silicon dioxide	7631-86-9	1.34		0.000099	
	boric oxide	1303-86-2	0.33		0.000024	
	Ni	7440-02-0	1.00	Plating1	0.000074	
	Sn	7440-31-5	2.78	Plating2	0.000205	

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Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Capacitor 3					**0.037800**	**0.263%**
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.011971	
	Titanium dioxide	13463-67-7	15.83		0.005984	
	Misc.	-	5.28		0.001996	
	Ni	7440-02-0	26.67	Inner Electrode	0.010081	
	Cu	7440-50-8	15.10	Outer Electrode	0.005708	
	Silicon dioxide	7631-86-9	1.34		0.000507	
	boric oxide	1303-86-2	0.33		0.000125	
	Ni	7440-02-0	1.00	Plating1	0.000378	
	Sn	7440-31-5	2.78	Plating2	0.001051	
Underfill					**0.053000**	**0.369%**
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.007950	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.005300	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.002650	
	Amine type hardener	trade secret	10.00	basis	0.005300	
	Silicon dioxide	60676-86-0	58.00	filler	0.030740	
	Carbon black	1333-86-4	1.00	color agent	0.000530	
	Additives	trade secret	1.00	additives	0.000530	
Lid					**8.957100**	**62.38%**
	Cu	7440-50-8	98.35	Main material	8.809308	
	Ni	7440-02-0	1.65	Main material	0.147792	
Lid Adhesive					0.148000	**1.031%**
	Aluminium Oxide Al2O3	-	80.00	Main material	0.118400	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.029600	
Solder Ball					**0.965683**	**6.726%**
	Sn	7440-31-5	96.50	basis	0.931884	
	Ag	7440-22-4	3.00	basis	0.028970	
	Cu	7440-50-8	0.50	basis	0.004828	
Substrate					**3.714546**	**25.870%**
	Cu	7440-50-8	40.49		1.504096	
	Sn	7440-31-5	0.95		0.035153	
	Ag	7440-22-4	0.03		0.001093	
	Core	trade secret	43.19		1.604315	
	ABF	trade secret	13.16		0.488771	
	Solder Mask	trade secret	2.18		0.081118	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
08/28/2015	1.0	Initial Xilinx release.

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