PK788 (v1.0) Apr 1, 2016

100% Material Declaration Data Sheet for FFV1136

Average Weight : 10.1412 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.248141**	**2.447%**
	Si	7440-21-3	100.00	basis	0.248141	
Bump					**0.007755**	**0.076%**
	Sn	7440-31-5	98.20	basis	0.007615	
	Ag	7440-22-4	1.80	basis	0.000140	
Underfill					**0.040000**	**0.394%**
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.006000	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.004000	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.002000	
	Amine type hardener	trade secret	10.00	basis	0.004000	
	Silicon dioxide	60676-86-0	58.00	filler	0.023200	
	Carbon black	1333-86-4	1.00	color agent	0.000400	
	Additives	trade secret	1.00	additives	0.000400	
Solder paste					**0.006464**	**0.064%**
	Sn	7440-31-5	96.50	metal	0.006238	
	Ag	7440-22-4	3.00	metal	0.000194	
	Cu	7440-50-8	0.50	metal	0.000032	
Capacitor 1					**0.057600**	**0.568%**
	BaTiO3 type	1304-28-5	37.46	Ceramic	0.021577	
	Titanium dioxide	13463-67-7	18.73		0.010788	
	Misc	-	6.24		0.003594	
	Ni	7440-02-0	17.95	Inner electrode	0.010339	
	Cu	7440-50-8	15.88	Out electrode	0.009147	
	Silicon dioxide	7631-86-9	1.41		0.000812	
	diboron trioxide; boric oxide	1303-86-2	0.35		0.000202	
	Ni	7440-02-0	0.54	Plating1	0.000311	
	Sn	7440-31-5	1.44	Plating2	0.000829	
Capacitor2					**0.013760**	**0.136%**
	BaTiO3 type	1304-28-5	34.54	Ceramic	0.004753	
	Titanium dioxide	13463-67-7	17.27		0.002376	
	Misc	-	5.76		0.000793	
	Ni	7440-02-0	31.90	Inner Electrode	0.004389	
	Cu	7440-50-8	8.52	Outer Electrode	0.001172	
	Silicon dioxide	7631-86-9	0.76		0.000105	
	diboron trioxide; boric oxide	1303-86-2	0.19		0.000026	
	Ni	7440-02-0	0.29	Plating1	0.000040	
	Sn	7440-31-5	0.77	Plating2	0.000106	
Lid					**5.095800**	**50.249%**
	Cu	7440-50-8	98.35	Main material	5.011719	
	Ni	7440-02-0	1.65	Main material	0.084081	
Lid adhesive					**0.116400**	**1.148%**
	Aluminium Oxide Al2O3	-	80.00	Main material	0.093120	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.023280	
Solder ball					**0.951543**	**9.383%**
	Sn	7440-31-5	96.50	Main material	0.918239	
	Ag	7440-22-4	3.00	Main material	0.028546	
	Cu	7440-50-8	0.50	Main material	0.004758	
Substrate					**3.603537**	**35.534%**
	Copper	7440-50-8	30.84		1.111331	
	Tin	7440-31-5	1.13		0.040720	
	Silver	7440-22-4	0.10		0.003604	
	Copper	7440-50-8	0.04		0.001441	
	Core	N/A	45.88		1.653303	
	PP	N/A	6.02		0.216933	
	ABF	N/A	14.00		0.504495	
	Solder Mask	N/A	2.00		0.072071	

Revision History

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

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