PK778 (v1.0) Feb 12, 2016

100% Material Declaration Data Sheet for FBV484

Average Weight : 2.005701 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.156648**	**7.81%**
	Si	7440-21-3	100.00	basis	0.156648	
Bump					**0.006576**	**0.33%**
	Sn	7440-31-5	98.20	basis	0.006458	
	Ag	7440-22-4	1.80	basis	0.000118	
Underfill					**0.026000**	**1.30%**
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.003900	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.002600	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.001300	
	Amine type hardener	trade secret	10.00	basis	0.002600	
	Silicon dioxide	60676-86-0	58.00	filler	0.015080	
	Carbon black	1333-86-4	1.00	color agent	0.000260	
	Additives	trade secret	1.00	additives	0.000260	
Solder paste					**0.002920**	**0.15%**
	Sn	7440-31-5	96.50	metal	0.002818	
	Ag	7440-22-4	3.00	metal	0.000088	
	Cu	7440-50-8	0.50	metal	0.000015	
Capacitor 1					**0.000600**	**0.03%**
	BaTiO3 type	1304-28-5	40.00	Ceramic	0.000240	
	Titanium dioxide	13463-67-7	20.00		0.000120	
	Misc	-	6.67		0.000040	
	Ni	7440-02-0	2.42	Inner electrode	0.000015	
	Cu	7440-50-8	20.73	Out electrode	0.000124	
	Silicon dioxide	7631-86-9	1.85		0.000011	
	diboron trioxide; boric oxide	1303-86-2	0.45		0.000003	
	Ni	7440-02-0	2.12	Plating1	0.000013	
	Sn	7440-31-5	5.76	Plating2	0.000035	
Capacitor3					**0.004600**	**0.23%**
	BaTiO3 type	1304-28-5	31.67	Ceramic	0.001457	
	Titanium dioxide	13463-67-7	15.83		0.000728	
	Misc	-	5.28		0.000243	
	Ni	7440-02-0	26.67	Inner Electrode	0.001227	
	Cu	7440-50-8	15.10	Outer Electrode	0.000695	
	Silicon dioxide	7631-86-9	1.34		0.000062	
	diboron trioxide; boric oxide	1303-86-2	0.33		0.000015	
	Ni	7440-02-0	1.00	Plating1	0.000046	
	Sn	7440-31-5	2.78	Plating2	0.000128	
Capacitor4					**0.014400**	**0.72%**
	BaTiO3 type	1304-28-5	37.46	Ceramic	0.005394	
	Titanium dioxide	13463-67-7	18.73		0.002697	
	Misc	-	6.24		0.000899	
	Ni	7440-02-0	17.95	Inner Electrode	0.002585	
	Cu	7440-50-8	15.88	Outer Electrode	0.002287	
	Silicon dioxide	7631-86-9	1.41		0.000203	
	diboron trioxide; boric oxide	1303-86-2	0.35		0.000050	
	Ni	7440-02-0	0.54	Plating1	0.000078	
	Sn	7440-31-5	1.44	Plating2	0.000207	
Solder ball					**0.404317**	**20.16%**
	Sn	7440-31-5	96.50	Main material	0.390166	
	Ag	7440-22-4	3.00	Main material	0.012130	
	Cu	7440-50-8	0.50	Main material	0.002022	
Plating[1]					**0.393732**	**19.63%**
	Copper	7440-50-8	100.00		0.393732	
Bump[1]					**0.034122**	**1.70%**
	Tin	7440-31-5	89.00		0.030368	
	Silver	7440-22-4	8.00		0.00273	
	Copper	7440-50-8	3.00		0.001024	
Core[1]					**0.714424**	**35.62%**
	Copper	7440-50-8	41.00		0.292914	
	Glass Cloth	65997-17-3	26.00		0.18575	
	Silica	7631-86-9	12.00		0.085731	
	Thermosetting Resin and Other Filler	Trade secret	21.00		0.150029	

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Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
					0.217915	**10.86%**
	Silica	7631-86-9	35.00		0.07627	
	Bisphenol A epoxy resin	25068-38-6	7.50		0.016344	
	Bisphenol F epoxy resin	9003-36-5	7.50		0.016344	
	Multifunctional aromatic epoxy resin	Trade Secret	3.00		0.006537	
	Coal tar naphtha	64742-94-5	3.00		0.006537	
	Cyclohexanone	108-94-1	3.00		0.006537	
	N,N-Dimethylformamide	68-12-2	0.55		0.001199	
	Toluene	108-88-3	0.20		0.000436	
	Methyl ethyl ketone	78-93-3	0.20		0.000436	
	Naphthalene	91-20-3	0.05		0.000109	
ABF[1]	Others	Trade Secret	40.00		0.087166	
					0.029447	**1.47%**
	Modified epoxy resin	Trade secret	38.00		0.01119	
	Barium sulfate	7727-43-7	14.00		0.004122	
	2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	13.00		0.003828	
	3-Methyl-3-methoxybutyl acetate	103429-90-9	13.00		0.003828	
	Silica	60676-86-0	10.00		0.002945	
	Solvent naphtha	64742-94-5	8.00		0.002356	
	Organic materials	Trade secret	4.00		0.001178	
Soldermask[1]						

1. Subcomponent of Substrate Component

Revision History

Date	Version	Description of Revisions
02/12/2016	1	Initial Xilinx release.

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