PK548 (v1.1) January 25, 2013

100% Material Declaration Data Sheet for 7 Series FFG676

Average Weight: 7.8820 g

Component	Substance Description	CAS Number or Description	Percentage of Component	Use in Product	Component Weight/ Substance Weight (grams)	Component Percent of Total
Silicon Die					**0.388303**	**4.926**
	Silicon (Si)	7440-21-3	100.00	Basis	0.388303	
Solder Bump					**0.018136**	**0.230**
	Tin (Sn)	7440-31-5	63.00	Basis	0.011426	
	Lead (Pb)	7439-92-1	37.00	Basis	0.006710	
Solder Paste					**0.005400**	**0.069**
	Tin (Sn)	7440-31-5	96.50	Metal	0.005211	
	Silver (Ag)	7440-22-4	3.00	Metal	0.000162	
	Copper (Cu)	7440-50-8	0.50	Metal	0.000027	
Capacitor 1					**0.021600**	**0.274**
	Ceramic (BaTiO3 type)	12047-27-7	70.60	Ceramic	0.015250	
	Nickel (Ni)	7440-02-0	6.70	Inner electrode	0.001447	
	Copper (Cu)	7440-50-8	20.10	Outer electrode	0.004342	
	Nickel (Ni)	7440-02-0	0.80	Plating1	0.000173	
	Tin (Sn)	7440-31-5	1.80	Plating2	0.000389	
Capacitor 2					**0.003800**	**0.048**
	Ceramic (BaTiO3 type)	12047-27-7	61.70	Ceramic	0.002345	
	Nickel (Ni)	7440-02-0	4.89	Inner electrode	0.000186	
	Indium Tin Oxide	50926-11-9	18.30	Outer electrode	0.000695	
	Copper (Cu)	7440-50-8	13.40	Outer electrode	0.000509	
	Nickel (Ni)	7440-02-0	0.49	Plating1	0.000019	
	Tin (Sn)	7440-31-5	1.22	Plating2	0.000046	
Capacitor 3					**0.001200**	**0.015**
	Ceramic (BaTiO3 type)	12047-27-7	66.00	Ceramic	0.000792	
	Inner electrode (Ni)	7440-02-0	2.67	Inner electrode	0.000032	
	Outer electrode (Cu)	7440-50-8	23.33	Outer electrode	0.000280	
	Plating 1 (Ni)	7440-02-0	2.33	Plating1	0.000028	
	Plating 2 (Sn)	7440-31-5	5.67	Plating2	0.000068	

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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 4					**0.007360**	**0.093**
	BaTiO3 type	12047-27-7	51.10	Ceramic	0.003761	
	Inner Electrode(Ni)	7440-02-0	27.00	Inner electrode	0.001987	
	Outer Electrode(Cu)	7440-50-8	16.00	Outer Electrode	0.001178	
	Glass	65997-17-3	0.90		0.000066	
	Plating1(Ni)	7440-02-0	2.00	Plating1	0.000147	
	Plating2(Sn)	7440-31-5	3.00	Plating2	0.000221	
Underfill					**0.049000**	**0.622**
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	basis	0.009800	
	Phenolic resin	trade secret	15.00	basis	0.007350	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.002450	
	Amine type accelerator	trade secret	5.00	basis	0.002450	
	Silicon dioxide	60676-86-0	51.50	basis	0.025235	
	Carbon black	1333-86-4	1.00	basis	0.000490	
	Additives	trade secret	2.50	Additive	0.001225	
Lid					**4.615000**	**58.551**
	Copper (Cu)	7440-50-8	97.94	Main material	4.519931	
	Nickel (Ni)	8049-31-8	2.06	Main material	0.095069	
Lid Adhesive					**0.115000**	**1.459**
	Aluminium Oxide	1344-28-1	70.00	Main material	0.080500	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main material	0.034500	
Solder Ball					**0.564707**	**7.165**
	Tin (Sn)	7440-31-5	96.50	Main material	0.544942	
	Silver (Ag)	7440-22-4	3.00	Main material	0.016941	
	Copper (Cu)	7440-50-8	0.50	Main material	0.002824	
Substrate					**2.092494**	**26.548**
	Copper (Cu)	7440-50-8	40.50		0.847460	
	Tin (Sn)	7440-31-5	1.13		0.023645	
	Lead (Pb)	7439-92-1	0.29		0.006068	
	Silver (Ag)	7440-22-4	0.02		0.000418	
	BT Core	N/A	42.70		0.893495	
	ABF	N/A	13.17		0.275581	
	Solder Mask	N/A	2.19		0.045826	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
03/23/12	1.0	Initial Xilinx release.
01/25/13	1.1	Update substrate component

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