PK622 (v1.1) June 8, 2016

100% Material Declaration Data Sheet for 7 Series FLG1930/FLG1931 Package

Average Weight: 27.8237 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					**0.751570**	**2.701%**
	Silicon	7440-21-3	100.00	Basis	0.751570	
Micro Bump					**0.038070**	**0.137%**
	Copper	7440-50-8	54.80	Metal	0.020863	
	Nickel	7440-02-0	22.69	Metal	0.008637	
	Tin	7440-31-5	21.87	Metal	0.008326	
	Silver	7440-22-4	0.64	Metal	0.000244	
Micro-Bump Underfill					**0.037920**	**0.136%**
	Amorphous Silica	Trade Secret	46.87	Filler	0.017775	
	Amine Compound	Trade Secret	20.84	Glue	0.007900	
	Epoxy Resin A	Trade Secret	15.63	Glue	0.005925	
	Epoxy Resin B	Trade Secret	15.63	Glue	0.005925	
	Epoxy Resin C	Trade Secret	1.04	Glue	0.000395	
Moulding Compound					**0.095451**	**0.343%**
	Silica Filler	Trade Secret	86.02	Filler	0.082108	
	Epoxy Resin	Trade Secret	8.60	Glue	0.008211	
	Hardener Resin	Trade Secret	5.38	Glue	0.005132	
Interposer Die					**0.176402**	**0.634%**
	Silicon	7440-21-3	100.00	Basis	0.176402	
C4 Bump					**0.106580**	**0.383%**
	Copper	7440-50-8	5.41	Metal	0.005763	
	Nickel	7440-02-0	3.22	Metal	0.003435	
	Tin	7440-31-5	57.53	Metal	0.061317	
	Lead	7439-92-1	33.84	Metal	0.036065	
Solder Paste					**0.030860**	**0.111%**
	Bismuth	7440-69-9	56.30	Metal	0.017370	
	Tin	7440-31-5	42.80	Metal	0.013210	
	Silver	7440-22-4	0.90	Metal	0.000280	

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Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
C4 Underfill					**0.135000**	**0.485%**
	Bisphenol F/ Epichlorohydrin Copolymer	9003-36-5	24.00	Basis	0.032400	
	Phenolic Resin	Trade Secret	19.00	Basis	0.025650	
	Bisphenol A Type Liquid Epoxy Resin	25068-38-6	4.00	Basis	0.005400	
	Amine Type Accelerator	Trade Secret	5.00	Basis	0.006750	
	Silicon Dioxide	60676-86-0	44.10	Basis	0.059535	
	Carbon Black	1333-86-0	0.90	Basis	0.001215	
	Additives	Trade Secret	3.00	Additives	0.004050	
Lid					**15.676440**	**56.342%**
	Copper	7440-50-8	99.64	Main Material	15.621060	
	Nickel	7440-02-0	0.36	Main Material	0.055380	
Lid Adhesive					**0.050000**	**0.180%**
	Silica, Vitreous	60676-86-0	60.00	Main Material	0.030000	
	Unsaturate Cyclic Siloxane Polymer	Unknown	30.00	Main Material	0.015000	
	Hydrocarbon Synthetic Rubber	Proprietary	8.00	Main Material	0.004000	
	Boron Nitrude	Proprietary	1.00	Main Material	0.000500	
	Carbon Black	1333-86-4	0.50	Main Material	0.000250	
	Toluene	108-88-3	0.50	Main Material	0.000250	
Lid TIM					**0.270000**	**0.970%**
	Aluminum Oxide	1344-28-1	85.00	Main Material	0.229500	
	Zinc Oxide	1314-13-2	5.00	Main Material	0.013500	
	Silicone	Confidential	9.00	Main Material	0.024300	
	Others	Confidential	1.00	Main Material	0.002700	
Solder Ball					**1.911630**	**6.871%**
	Tin	7440-31-5	96.50	Main Material	1.844720	
	Silver	7440-22-4	3.00	Main Material	0.057350	
	Copper	7440-50-8	0.50	Main Material	0.009560	
Capacitor 1					**0.054901**	**0.197%**
	BaTi03 Type	12047-27-7	70.60	Ceramic	0.038761	
	Nickel	7440-02-0	6.70	Inner Electrode	0.003678	
	Copper	7440-50-8	20.10	Outer Electrode	0.011035	
	Nickel	7440-02-0	0.80	Plating 1	0.000439	
	Tin	7440-31-5	1.80	Plating 2	0.000988	

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Capacitor 2					**0.030324**	**0.109%**
	BaTi03 Type	12047-27-7	61.70	Ceramic	0.018710	
	Nickel	7440-02-0	4.89	Inner Electrode	0.001483	
	Indium Tin Oxide	50926-11-9	18.30	Outer Electrode	0.005549	
	Copper	7440-50-8	13.40	Outer Electrode	0.004063	
	Nickel	7440-02-0	0.49	Plating 1	0.000149	
	Tin	7440-31-5	1.22	Plating 2	0.000370	
Capacitor 3					**0.003595**	**0.013%**
	BaTi03	12047-27-7	66.00	Ceramic	0.002373	
	Nickel	7440-02-0	2.67	Inner Electrode	0.000096	
	Copper	7440-50-8	23.33	Outer Electrode	0.000839	
	Nickel	7440-02-0	2.33	Plating 1	0.000084	
	Tin	7440-31-5	5.67	Plating 2	0.000204	
Capacitor 4					**0.0149898**	**0.054%**
	BaTi03 Type	12047-27-7	70.00	Ceramic	0.010429	
	Copper	7440-50-8	21.95	Inner Electrode	0.003265	
	Nickel	7440-02-0	1.21	Outer Electrode	0.000184	
	Nickel	7440-02-0	2.75	Plating 1	0.000408	
	Tin	7440-31-5	4.09	Plating 2	0.000612	
Substrate					**8.440067**	**30.334%**
	Copper	7440-50-8	48.52		4.094700	
	Tin	7440-31-5	0.11		0.009250	
	Lead	7439-92-1	0.16		0.013598	
	Silver	7440-22-4	0.48		0.040569	
	BT Core	N/A	39.44		3.328950	
	ABF	N/A	10.30		0.869350	
	Solder Mask	Trade Secret	0.99		0.083650	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
09/16/13	1.0	Initial Xilinx release.
08/06/16	1.1	Update to reference FLG1931 package

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