100% Material Declaration Data Sheet for RF1930

XILINX
PK810 (v1.0) June 23, 2016

Average Weight : 33.9868 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.893576**	**2.629%**
	Silicon	7440-21-3	100.00	Basis	0.893576	
Bump					**0.043334**	**0.128%**
	Tin	7440-31-5	63.00	Basis	**0.027300**	
	Lead	7439-92-1	37.00	Basis	0.016034	
Underfill					**0.093450**	**0.275%**
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	Basis	0.018690	
	Phenolic resin	trade secret	15.00	Basis	0.014018	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	Basis	0.004673	
	Amine type accelerator	trade secret	5.00	Basis	0.004673	
	Silicon dioxide	60676-86-0	51.50	Basis	0.048127	
	Carbon black	1333-86-4	1.00	Basis	0.000935	
	Additives	trade secret	2.50	Additive	0.002336	
Solder Paste					**0.009288**	**0.027%**
	Tin	7440-31-5	63.00	Metal	0.005851	
	Lead	7439-92-1	37.00	Metal	0.002165	
Capacitor 1					**0.041280**	**0.121%**
	Barium	12047-27-7	88.86	Ceramic	0.036680	
	Manganese	1313-13-9	1.43	Ceramic	0.000590	
	Nickel	7440-02-0	4.29	Internal Electrode	0.001769	
	Copper	7440-50-8	0.70	Termination	0.000289	
	Boron	1303-86-2	0.01	Termination	0.000006	
	Nickel	7440-02-0	3.57	Plating	0.001474	
	Tin	7440-31-5	0.90	Plating	0.000372	
	Lead	7439-92-1	0.24	Plating	0.000100	
Capacitor 2					**0.016400**	**0.048%**
	Barium	12047-27-7	88.86	Ceramic	0.014573	
	Manganese	1313-13-9	1.43	Ceramic	0.000234	
	Nickel	7440-02-0	4.29	Internal Electrode	0.000703	
	Copper	7440-50-8	0.70	Termination	0.000115	
	Glass oxide	65997-17-3	0.01	Termination	0.000002	
	Nickel	7440-02-0	3.57	Plating	0.000586	
	Tin	7440-31-5	0.86	Plating	0.000141	
	Lead	7439-92-1	0.29	Plating	0.000047	
Capacitor 3					**0.003125**	**0.009%**
	Barium	12047-27-7	71.29	Ceramic	0.002228	
	Manganese	1313-13-9	10.43	Ceramic	0.000326	
	Nickel	7440-02-0	2.00	Internal Electrode	0.000063	
	Copper	7440-50-8	11.57	Termination	0.000362	
	Boron	1303-86-2	0.21	Termination	0.000007	
	Nickel	7440-02-0	1.80	Plating	0.000056	
	Gold	7440-57-5	2.70	Plating	0.000084	
Capacitor 4					**0.015456**	**0.045%**
	Barium	12047-27-7	0.72	Ceramic	0.000112	
	Manganese	1313-13-9	0.11	Ceramic	0.000016	
	Nickel	7440-02-0	0.04	Internal Electrode	0.000006	
	Copper	7440-50-8	0.06	Termination	0.000009	
	Glass oxide	65997-17-3	0.00	Termination	0.000000	
	Nickel	7440-02-0	0.03	Plating	0.000004	
	Tin	7440-31-5	0.04	Plating	0.000006	
	Lead	7439-92-1	0.00	Plating	0.000001	
Heat sink					**22.670000**	**66.702%**
	Copper	7440-50-8	98.35	Main material	22.295945	
	Nickel	7440-02-0	1.65	Main material	0.374055	
Heat sink adhesive					**0.228000**	**0.671%**
	Aluminium Oxide Al2O3	1344-28-1	70.00	Main material	0.159600	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main material	0.068400	
Solder ball					**1.836968**	**5.405%**
	Tin	7440-31-5	63.00	Main material	1.157290	
	Lead	7439-92-1	37.00	Main material	0.679678	
Substrate					8.109123	**23.860%**
	Copper	7440-50-8	39.00		3.212024	
	Tin	7440-31-5	0.30		0.026760	
	Lead	7439-92-1	0.20		0.015407	
	Core	N/A	40.00		3.271220	
	ABF	N/A	18.00		1.471806	
	Solder mask	N/A	1.40		0.111095	

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Revision History

Date	Version	Description of Revisions
6/23/2016	1.0	Initial Xilinx release.

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