



# 100% Material Declaration Data Sheet for RF1156, RF1157, RF1158

PK812 (v1.0) August 20, 2016

**Average Weight : 13.7700 g**

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight ( in grams)	Component % of total
Silicon die					<b>0.829368</b>	<b>6.023%</b>
	Silicon	7440-21-3	100.00	basis	0.829368	
Bump					<b>0.038845</b>	<b>0.282%</b>
	Consigned				0.000000	
Underfill					<b>0.086000</b>	<b>0.625%</b>
	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	20.00	basis	0.017200	
	Phenolic resin	trade secret	15.00	basis	0.012900	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.004300	
	Amine type accelerator	trade secret	5.00	basis	0.004300	
	Silicon dioxide	60676-86-0	51.50	basis	0.044290	
	Carbon black	1333-86-4	1.00	basis	0.000860	
	Additives	trade secret	2.50	Additive	0.002150	
Solder paste					<b>0.005896</b>	<b>0.043%</b>
	Tin	7440-31-5	63.00	metal	0.003714	
	Lead	7439-92-1	37.00	metal	0.001374	
Capacitor 1					<b>0.000920</b>	<b>0.007%</b>
	Barium	12047-27-7	88.86	Ceramic	0.000817	
	Manganese	1313-13-9	1.43	Ceramic	0.000013	
	Nickel	7440-02-0	4.29	Internal Electrode	0.000039	
	Copper	7440-50-8	0.70	Termination	0.000006	
	Boron	1303-86-2	0.01	Termination	0.000000	
	Nickel	7440-02-0	3.57	Plating	0.000033	
	Tin	7440-31-5	0.90	Plating	0.000008	
	Lead	7439-92-1	0.24	Plating	0.000002	
Capacitor 2					<b>0.003800</b>	<b>0.028%</b>
	Barium	12047-27-7	88.86	Ceramic	0.003377	
	Manganese	1313-13-9	1.43	Ceramic	0.000054	
	Nickel	7440-02-0	4.29	Internal Electrode	0.000163	
	Copper	7440-50-8	0.70	Termination	0.000027	
	Glass oxide	65997-17-3	0.01	Termination	0.000001	
	Nickel	7440-02-0	3.57	Plating	0.000136	
	Tin	7440-31-5	0.86	Plating	0.000033	
	Lead	7439-92-1	0.29	Plating	0.000011	
Capacitor 3					<b>0.000310</b>	<b>0.002%</b>
	Barium	12047-27-7	71.29	Ceramic	0.000221	
	Manganese	1313-13-9	10.43	Ceramic	0.000032	
	Nickel	7440-02-0	2.00	Internal Electrode	0.000006	
	Copper	7440-50-8	11.57	Termination	0.000036	
	Boron	1303-86-2	0.21	Termination	0.000001	
	Nickel	7440-02-0	1.80	Plating	0.000006	
Gold	7440-57-5	2.70	Plating	0.000008		
Capacitor 4					<b>0.000920</b>	<b>0.007%</b>
	Barium	12047-27-7	72.00	Ceramic	0.000662	
	Manganese	1313-13-9	11.00	Ceramic	0.000101	
	Nickel	7440-02-0	4.00	Internal Electrode	0.000037	
	Copper	7440-50-8	6.00	Termination	0.000055	
	Glass oxide	65997-17-3	0.00	Termination	0.000000	
	Nickel	7440-02-0	3.00	Plating	0.000028	
	Tin	7440-31-5	4.00	Plating	0.000037	
Lead	7439-92-1	0.00	Plating	0.000000		
Heat sink					<b>7.380000</b>	<b>53.595%</b>
	Copper	7440-50-8	98.35	Main material	7.258230	
	Nickel	7440-02-0	1.65	Main material	0.121770	
Heat sink adhesive					<b>0.187000</b>	<b>1.358%</b>
	Aluminium Oxide Al2O3	1344-28-1	70.00	Main material	0.130900	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	30.00	Main material	0.056100	
Solder ball					<b>1.100277</b>	<b>7.990%</b>
	Tin	7440-31-5	63.00	Main material	0.693175	
	Lead	7439-92-1	37.00	Main material	0.407102	
Substrate					<b>4.136664</b>	<b>30.041%</b>
	Copper	7440-50-8	39.84		1.648047	
	Tin	7440-31-5	0.52		0.021511	
	Lead	7439-92-1	0.31		0.012824	
	Core	N/A	38.63		1.597993	
	ABF	N/A	19.00		0.785966	
	Solder Mask	N/A	1.71		0.070737	

## Revision History

Date	Version	Description of Revisions
8/20/2016	1.0	Initial Xilinx release.

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