



PK944(v1.0) January 12, 2018

100% Material Declaration Data Sheet for Zynq Ultrascale+ FFVG1517

Average Weight : 23.569974 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die	Silicon	7440-21-3	100.00	basis	0.681875	2.893%
					0.681875	
Bump	Tin	7440-31-5	98.20	basis	0.029436	0.127%
	Silver	7440-22-4	1.80	basis	0.000540	
Underfill					0.081100	0.344%
	Bisphenol F type liquid	9003-36-5	15.00	basis	0.012165	
	1,6-Bis(2,3-	27610-48-6	10.00	basis	0.008110	
	Bisphenol A type liquid	25068-38-6	5.00	basis	0.004055	
	Amine type hardener	trade secret	10.00	basis	0.008110	
	Silicon dioxide	60676-86-0	58.00	filler	0.047038	
	Carbon black	1333-86-4	1.00	color agent	0.000811	
	Additives	trade secret	1.00	additives	0.000811	
Solder paste					0.014752	0.063%
	Tin	7440-31-5	82.70	metal	0.012200	
	Silver	7440-22-4	2.70	metal	0.000398	
	Copper	7440-50-8	1.55	metal	0.000229	
	Additives	trade secret	13.05	flux	0.001925	
Capacitor 1					0.001200	0.005%
	BaTiO3 type	1304-28-5	30.22	Ceramic	0.000363	
	Titanium dioxide	13463-67-7	15.11		0.000181	
	Misc	trade secret	5.04		0.000060	
	Nickel	7440-02-0	33.44	Inner electrode	0.000401	
	Copper	7440-50-8	11.87	Out electrode	0.000142	
	Silicon dioxide	7631-86-9	1.06		0.000013	
	diboron trioxide; boric	1303-86-2	0.26		0.000003	
	Nickel	7440-02-0	0.81	Plating1	0.000010	
	Tin	7440-31-5	2.19	Plating2	0.000026	
Capacitor 2					0.025000	0.106%
	BaTiO3 type	12047-27-7	34.00	Ceramic	0.008500	
	Nickel	7440-02-0	18.00	Inner Electrode	0.004500	
	Copper	7440-50-8	41.00	Outer Electrode	0.010250	
	Nickel	7440-02-0	3.40	Plating1	0.000850	
Heat sink					0.000850	
	Copper	7440-50-8	98.35	Main material	14.290255	61.646%
	Nickel	7440-02-0	1.65	Main material	0.239745	
Heat sink adhesive					0.248000	1.052%
	Aluminium Oxide Al2O3	trade secret	80.00	Main material	0.198400	
Solder ball					0.049600	
					1.267250	5.377%
	Tin	7440-31-5	96.50	Main material	1.222896	
	Silver	7440-22-4	3.00	Main material	0.038018	
Substrate	Copper	7440-50-8	0.50	Main material	0.006336	
					6.690846	28.387%
	Tin	7440-31-5	41.72		2.791421	
	Silver	7440-22-4	0.39		0.026094	
	Core	N/A	38.96		2.606754	
	ABF	N/A	17.53		1.172905	
	Solder Mask	N/A	1.39		0.093003	

Revision History

Date	Version	Description of Revisions
1/12/2018	1.0	Initial Xilinx Release.

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