



PK856(v1.1) September 21, 2017

100% Material Declaration Data Sheet for UltraScale+ Devices SFVB / SFVC784

Average Weight :

4.8767 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	0.166118	3.406%
					0.166118	
Bump	Tin	7440-31-5	98.2	basis	0.007039	0.147%
	Silver	7440-22-4	1.8	basis	0.000129	
					0.007168	
Underfill	Bisphenol F type liquid epoxy	9003-36-5	15	basis	0.004200	0.574%
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10	basis	0.002800	
	Bisphenol A type liquid epoxy	25068-38-6	5	basis	0.001400	
	Amine type hardener	trade secret	10	basis	0.002800	
	Silicon dioxide	60676-86-0	58	basis	0.016240	
	Carbon black	1333-86-4	1	basis	0.000280	
	Additives	trade secret	1	basis	0.000280	
				0.009300		
Solder paste	Tin	7440-31-5	82.70	metal	0.007691	0.191%
	Silver	7440-22-4	2.70	metal	0.000251	
	Copper	7440-50-8	1.55	metal	0.000144	
	Additives	trade secret	13.05	metal	0.001214	
				0.003600		
Capacitor 1	Barium oxide, obtained by calcining witherite	1304-28-5	37.46	Ceramic	0.001349	0.074%
	Titanium dioxide	13463-67-7	18.73		0.000674	
	Misc	-	6.24		0.000225	
	Nickel	7440-02-0	17.95	Inner electrode	0.000646	
	Copper	7440-50-8	15.88	Out electrode	0.000572	
	Silicon dioxide	7631-86-9	1.41		0.000051	
	diboron trioxide; boric oxide	1303-86-2	0.35		0.000013	
	Nickel	7440-02-0	0.54	Plating1	0.000019	
Tin	7440-31-5	1.44	Plating2	0.000052		
				2.210000		
Heat sink	Copper	7440-50-8	98.35	Main material	2.173535	45.318%
	Nickel	7440-02-0	1.65	Main material	0.036465	
				0.055000		
Heat sink adhesive	Aluminium Oxide Al2O3	-	80.00	Main material	0.044000	1.128%
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.011000	
				0.379008		
Solder ball	Tin	7440-31-5	96.50	Main material	0.365743	7.772%
	Silver	7440-22-4	3.00	Main material	0.011370	
	Copper	7440-50-8	0.50	Main material	0.001895	
				2.018506		
Substrate	Copper	7440-50-8	56.49		1.145340	41.391%
	Tin	7440-31-5	0.61		0.012313	
	Silver	7440-22-4	0.02		0.000404	
	Resin	N/A	0.28		0.000565	
	Core	N/A	25.33		0.511288	
	ABF	N/A	16.01		0.323163	
	Solder Mask	N/A	1.26		0.025433	

Revision History

Date	Version	Description of Revisions
12/28/2016	1.0	Initial Xilinx release.
9/21/2017	1.1	Updated title