



PK1227(v1.0) August 12, 2025

100% Material Declaration Data Sheet for XCVU13P-FHGB2104

Average Weight : 42.9679 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	2.206827	5.136%
					2.206827	
Micro-bump	Copper	7440-50-8	54.80	metal	0.014057	
	Nickel	7440-02-0	22.69	metal	0.005819	
	Tin	7440-31-5	21.87	metal	0.005610	
	Silver	7440-22-4	0.64	metal	0.000165	
					0.050617	0.118%
Micro-bump underfill	Amorphous silica	trade secret	46.87	Filler	0.023723	
	Amine compound	trade secret	20.84	Glue	0.010547	
	Epoxy resin compound-A	trade secret	15.63	Glue	0.007910	
	Epoxy resin compound-B	trade secret	15.63	Glue	0.007910	
	Epoxy resin compound-C	trade secret	1.04	Glue	0.000527	
				0.109181	0.254%	
Mold compound	Silica filler	trade secret	86.02	Filler	0.093920	
	Epoxy resin	trade secret	8.60	Glue	0.009392	
	Hardener resin	trade secret	5.38	Glue	0.005870	
				0.512320	1.192%	
Interposer die	Silicon	7440-21-3	100.00	basis	0.512320	1.192%
C4 Bump	Copper	7440-50-8	70.73	metal	0.077322	
	Tin	7440-31-5	28.53	metal	0.031186	
	Silver	7440-22-4	0.74	metal	0.000809	
					0.077540	0.180%
Solder Paste	Tin	7440-31-5	96.50	metal	0.074826	
	Silver	7440-22-4	3.00	metal	0.002326	
	Copper	7440-50-8	0.50	metal	0.000388	
				0.190624	0.444%	
C4 Underfill	Bisphenol F/ epichlorohydrin copolymer	9003-36-5	24.00	basis	0.045750	
	Phenolic resin	trade secret	19.00	basis	0.036219	
	Bisphenol A type liquid epoxy resin	25068-38-6	4.00	basis	0.007625	
	Amine type accelerator	trade secret	5.00	basis	0.009531	
	Silicon dioxide	60676-86-0	44.10	basis	0.084065	
	Carbon black	1333-86-4	0.90	basis	0.001716	
	Additives	trade secret	3.00	Additive	0.005719	
				21.365476	49.724%	
Lid	Copper	7440-50-8	99.64	Main material	21.285560	
	Nickel	7440-02-0	0.36	Main material	0.076916	
				0.121879	0.283%	
Lid Adhesive	Silicone	Confidential	80.00	Main material	0.097263	
	Others	Confidential	20.00	Main material	0.024316	
				0.587328	1.367%	
Lid TIM	Aluminum oxide	1344-28-1	85.00	Main material	0.499229	
	Zinc oxide	1314-13-2	5.00	Main material	0.029366	
	Silicone	Confidential	9.00	Main material	0.052860	
	Others	Confidential	1.00	Main material	0.005873	
				1.560757	3.632%	
Solder Ball	Tin	7440-31-5	96.50	Main material	1.506131	
	Silver	7440-22-4	3.00	Main material	0.046823	
	Copper	7440-50-8	0.50	Main material	0.007804	
				0.052645	0.123%	
Capacitor 1	Titanium Dioxide	13463-67-7	15.11		0.007955	
	Misc		5.04		0.002853	
	Nickel	7440-02-0	33.44	Inner electrode	0.017604	
	Copper	7440-50-8	11.87	Out electrode	0.006249	
	Silicon Dioxide	7631-86-9	1.06		0.000558	
	Diboron trioxide; Boric	1303-86-2	0.26		0.000137	
	Nickel	7440-02-0	0.81	Plating1	0.000426	
	Tin	7440-31-5	2.19	Plating2	0.001153	
	Other		30.22		0.015909	
					0.019829	0.046%
Capacitor 2	BaTiO3 type	12047-27-7	51.10	Ceramic	0.010133	
	Copper	7440-50-8	27.00	Inner electrode	0.005354	
	Nickel	7440-02-0	16.90	Out electrode	0.003351	
	Nickel	7440-02-0	2.00	Plating1	0.000397	
	Tin	7440-31-5	3.00	Plating2	0.000595	
					15.978253	37.186%
Substrate	Copper	7440-50-8	38.22	metal	6.109982	
	Tin	7440-31-5	0.14	metal	0.022719	
	Core	N/A	43.40	Glue	6.940960	
	Plugging	N/A	0.51	Glue	0.080851	
	ABF	N/A	16.54	Glue	2.646000	
	Solder Mask	N/A	0.95	Glue	0.151712	
	Nickel	7440-02-0	0.16	metal	0.026014	
	Palladium	7440-05-3	0.02	metal	0.000004	
	Gold	7440-57-5	0.06	metal	0.000010	

Revision History

Date	Version	Description of Revisions
8/12/2025	1.0	Initial AMD release per xcn23002 and xcn23007.

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