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AMD

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100% Material Declaration Data Sheet for XQ Grade Virtex 7 RF1761

Average Weight : 34.4766 g

Component	Substance Description	CAS # or Description	% of component	Use in product	Component weight / substance weight (in grams)	Component % of total
Silicon die					**0.835844**	**2.424%**
	Silicon	7440-21-3	100.00	basis	0.835844	
Bump					**0.022129**	**0.064%**
	Polymer	N/A	16.07	PI	0.003556	
	Titanium	7440-32-6	0.04	UBM-sputter Ti	0.000010	
	Copper	7440-50-8	0.43	UBM-sputter Cu	0.000096	
	Nickel	7440-02-0	2.59	UBM-plating Ni	0.000573	
	Tin	7440-31-5	79.41	Bump-plating SnAg	0.017572	
	Silver	7440-22-4	1.46	Bump-plating SnAg	0.000322	
Underfill					**0.113000**	**0.328%**
	Bisphenol F type liquid epoxy resin	9003-36-5	15.00	basis	0.016950	
	1,6-Bis(2,3-epoxypropoxy)naphthalene	27610-48-6	10.00	basis	0.011300	
	Bisphenol A type liquid epoxy resin	25068-38-6	5.00	basis	0.005650	
	Amine type hardener	trade secret	10.00	basis	0.011300	
	Silicon dioxide	60676-86-0	58.00	filler	0.065540	
	Carbon black	1333-86-4	1.00	color agent	0.001130	
	Additives	trade secret	1.00	additives	0.001130	
Solder paste					**0.012260**	**0.036%**
	Tin	7440-31-5	54.50	metal	0.006681	
	Lead	7439-92-1	33.00	metal	0.004046	
	Organic amine	trade secret	4.90	metal	0.000601	
	Solvent	trade secret	4.90	flux	0.000601	
	Copolymer	trade secret	2.70		0.000331	
Capacitor 1					**0.021600**	**0.063%**
	Barium	12047-27-7	88.86	Ceramic	0.019193	
	Manganese	1313-13-9	1.43	Ceramic	0.000309	
	Nickel	7440-02-0	4.29	Internal Electrode	0.000926	
	Copper	7440-50-8	0.70	Termination	0.000151	
	Boron	1303-86-2	0.01	Termination	0.000003	
	Nickel	7440-02-0	3.57	Plating	0.000771	
	Tin	7440-31-5	0.90	Plating	0.000194	
	Lead	7439-92-1	0.24	Plating	0.000052	
Capacitor 2					**0.000194**	**0.001%**
	Barium oxide, obtained by calcining witherite	1304-28-5	40.00	Ceramic	0.000078	
	Titanium dioxide	13463-67-7	20.00		0.000039	
	Misc	-	6.67		0.000013	
	Nickel	7440-02-0	2.42	Inner Electrode	0.000005	
	Copper	7440-50-8	20.73	Outer electrode	0.000040	
	Silicon dioxide	7631-86-9	1.85		0.000004	
	diboron trioxide; boric oxide	1303-86-2	0.45		0.000001	
	Nickel	7440-02-0	2.12	Plating2	0.000004	
	Tin	7440-31-5	3.63		0.000007	
	Lead	7439-92-1	2.13		0.000004	
Capacitor 3					**0.021600**	**0.06%**
	Barium titanium oxide	12047-27-7	66.72		0.014412	
	Nickel	7440-02-0	3.93		0.000848	
	Copper	7440-50-8	23.69		0.005117	
	Tin	7440-31-5	4.44		0.000959	
	Lead	7439-92-1	1.22		0.000264	
Capacitor 4					**0.015810**	**0.05%**
	Barium	12047-27-7	72.40	Ceramic	0.011446	
	Manganese	1313-13-9	10.60	Ceramic	0.001676	
	Nickel	7440-02-0	4.00	Internal Electrode	0.000632	
	Copper	7440-50-8	5.80	Termination	0.000917	
	Glass oxide	65997-17-3	0.20	Termination	0.000032	
	Nickel	7440-02-0	2.66	Plating	0.000421	
	Tin	7440-31-5	3.99	Plating	0.000631	
	Lead	7439-92-1	0.35	Plating	0.000055	
Heat sink					**20.600000**	**59.75%**
	Copper	7440-50-8	97.94	Main material	20.175640	
	Ni	8049-31-8	2.06	Main material	0.424360	
Heat sink adhesive					**0.190000**	**0.55%**
	Treated Aluminium Oxide	None	80.00	Main material	0.152000	
	Dimethyl siloxane, dimethylvinyl-terminated	68083-19-2	20.00	Main material	0.038000	
Solder ball					**1.675163**	**4.859%**
	Tin	7440-31-5	63.00	Main material	1.055353	
	Lead	7439-92-1	37.00	Main material	0.619810	
Substrate					**10.968970**	**31.816%**
	Copper	7440-50-8	58.82	Metalization	6.452439	
	Tin	7440-31-5	0.42	Metalization	0.045802	
	Silver	7440-22-4	0.01	Metalization	0.001424	
	Core	7440-50-8	27.67	Core	3.034722	
	Plugging	9003-36-5	0.33	Via Plug	0.036129	
	ABF	25068-38-6	11.86	Buildup	1.300500	
	Solder Mask	7727-43-7	0.89	Solder Mask	0.097954	

Revision History

Date	Version	Description of Revisions
9/8/2026	1.0	Initial AMD Release.

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