



PK532 (v1.0) November 15,
2011

100% Material Declaration Data Sheet for Spartan®-3/-3E/-3A FG320 (Cu Wire) Package

Average Weight: 1.2209 g

Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Silicon Die					0.046403	3.801
	Silicon	7440-21-3	100.00		0.046403	
Die Attach Material					0.008456	0.693
	Silver (Ag)	7440-22-4	77.50		0.006553	
	Bismaleimide monomer	Trade Secret	15.00		0.001268	
	Acrylate monomer	Trade Secret	7.50		0.000634	
Mold Compound					0.406264	33.275
	Epoxy Resin	Trade Secret	5.00		0.020313	
	Phenol Resin	Trade Secret	3.00		0.012188	
	Phenol Novolac	9003-35-4	3.00		0.012188	
	Metal Hydroxide	Trade Secret	3.00		0.012188	
	Carbon black	1333-86-4	0.30		0.001219	
	Silica fused	60676-86-0	70.40		0.286010	
	Silica fused	7631-86-9	15.00		0.060940	
	Silica, crystalline	14808-60-7	0.30		0.001219	
Copper Wire					0.012610	1.033
	Copper (Cu)	7440-50-8	97.28		0.012267	
	Palladium	7440-05-3	2.70		0.000340	
	Impurities	NA	0.02		0.000003	
Solder Balls					0.304575	24.946
	Tin (Sn)	7440-31-5	63.00		0.191882	
	Lead (Pb)	7439-92-1	37.00		0.112693	

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Component	Substance Description	CAS# or Description	% of Component	Use in Product	Component Weight/ Substance Weight (in grams)	Component % of Total
Substrate					0.442608	36.252
	Copper (Cu)	7440-50-8	29.10		0.128780	
	Nickel (Ni)	7786-81-4	5.11		0.022606	
	Gold (Au)	7440-50-5	0.37		0.001622	
	Copper Foil	7440-50-8	2.80		0.012386	
	BT (core)	21645-51-2 65997-17-3 Trade Secret	53.18		0.235382	
	Solder mask	14807-96-6 7727-43-7 7631-86-9 34590-94-8 85954-11-6 Trade Secret	9.45		0.041832	

Revision History

The following table shows the revision history for this document.

Date	Version	Description of Revisions
11/15/11	1.0	Initial Xilinx release.

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