Zetex Material Data Sheet



Reference: Pb-free EP3 Revision date: Sep 2005

Construction element	Material group	Materials	CAS (where available)	Average mass (%)	Sum (%)	Mass (mg)	ppm
Chip	Silicon	Silicon	7440-21-3	1.15	1.15	1.83	11501
Leadframe	Copper Alloy	Copper	7440-50-8	54.03	55.49	85.90	540252
		Iron	7439-89-6	1.33		2.12	13318
		Zinc	7440-66-6	0.07		0.12	723
		Phosphorus	7723-14-0	0.04		0.07	447
		Lead	7439-92-1	0.02		0.03	167
Leadframe plating	Silver	Silver	7440-22-4	0.20	0.20	0.31	1979
Wires	Gold wire	Gold wire	7440-57-5	0.11	0.11	0.17	1073
Encapsulation	Filled silicone	Cristobalite	14464-46-1	0.11	40.41	0.18	1126
	resin	Amorphous Fused Silicon	60676-86-0	26.49		42.12	264906
		Fibrous Glass	65997-17-3	6.30		10.01	62956
		Carbon Black	1333-86-4	0.11		0.18	1126
		Amorphous Silica	7631-86-9	0.88		1.40	8805
		Quartz	14808-60-7	0.11		0.18	1126
		Octamethylcyclot etrasiloxane	556-67-2	0.11		0.18	1126
		Phenylsilsesquio xane- dimethylsiloxane copolymer	73138-88-2	6.30		10.01	62956
Alternative Leadfinish	Tin only	Tin	7440-31-5	2.42		4.20	26411
				Sum in Total:	100.00	159.00	

Fluctuation margin ±10%

This environmental data is based on information provided by our suppliers; we believe it to be correct but do not routinely validate it by measurement.

The information is for guidance only, and Zetex does not guarantee its absolute accuracy or completeness.

The active part of each device is a silicon chip doped at atomic levels (some tens of ppb) with Phosphorus, Boron and Arsenic. The back of the die is raw or metallized with thin layers of Titanium, Nickel, Silver or Gold in order to enhance the die bonding to the header or leadframe. These and other substances are not reported as being present in Zetex products where their concentration is less than 20ppm, as they are not considered detectable by normal analytical methods.

The lead contained within the leadframe alloy is exempted from the RoHS Directive 2002/95/EC as defined in clauses 6 & 7 of the Annex.

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