Material Data Sheet



Reference: SOT23 Large Flag Discrete Revision date: May 2011

Construction element	Material group	Materials	CAS if applicable	Average mass [%]	Sum [%]	Mass [mg]	Sum [mg]	ppm
Die	Silicon	Silicon	7440-21-3	6.92	6.92	0.641	0.641	69203
Leadframe	Copper	Copper	7440-50-8	32.37		2.998	3.188	323720
		Chromium	7440-47-3	0.12		0.011		1188
		Titanium	7440-32-6	0.06		0.006		648
		Silicon	7440-21-3	0.02		0.002		216
		Silver	7440-22-4	1.85		0.171		18464
Die Attach	Silver epoxy	Epoxy Resin	9003-36-5	0.05	0.35	0.005	0.032	518
		1,4-bis(2,3- epoxypropoxy) butane	2425-79-8	0.03		0.002		259
		Aromatic Amine	-	0.01		0.001		104
		Silver	7440-22-4	0.26		0.024		2574
Wires	Gold	Gold	7440-57-5	1.09	1.09	0.101	0.101	10906
Encapsulation	GE1030M	Epoxy resin	-	4.52	56.11	0.419	5.196	45199
		Phenol Resin	-	4.52		0.419		45199
		Silica	60676-86-0	40.27		3.730		402726
		Metal Hydroxide	-	5.66		0.524		56611
		Carbon Black	1333-86-4	0.19		0.017		1885
		Quartz	14808-60-7	0.94		0.087		9437
Lead Finish	Matte Tin	Tin	7440-31-5	1.11	1.11	0.103	0.103	11143
	•			Sum in Total:	100.0	9.261		•

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.

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