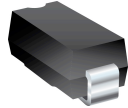


# MATERIAL DECLARATION SHEET



Material Number	SMLJ45CA~170CA			
Product Line	Semiconductors			
Compliance Date	2011/01/01			
RoHS Compliant	Yes	MSL	1	

No.	Construction Element(subpart)	Homogeneous Material	Material weight [mg]	Homogeneous Material\ Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt	Subpart mass of total wt. (%)
1	Dice	Silicon	7.358	Silicon	7440-21-3	60.18	1.8157	3.017
				Phosphorus	7723-14-0	0.01	0.0003	
				Boron	7440-42-8	0.01	0.0003	
				Nickel	7440-02-0	14.80	0.4465	
				Lead-containing glass	7439-92-1	12.50	0.3771	
				Silicon dioxide	7631-86-9	10.00	0.3017	
				Aluminum oxide	1344-28-1	2.50	0.0754	
2	Die attach (Solder)	Solder paste	13.250	Tin	7440-31-5	5.00	0.272	5.433
				Lead	7439-92-1	92.50	5.025	
				Silver	7440-22-4	2.50	0.136	
3	Lead frame / Leads / Disc	N/A	110.667	Copper	7440-50-8	99.80	45.286	45.377
				Iron	7439-89-6	0.15	0.068	
				Phosphorus	7723-14-0	0.05	0.023	
4	Molding Compound (Plastic Package Only)	Epoxy material	111.333	Silica	14808-60-7	76.00	34.694	45.650
				Epoxy resin	25928-94-3	9.00	4.1085	
				Phenolic resin-A,-B	9003-35-4	8.00	3.652	
				Hydroxide metal	21645-51-2	6.00	2.739	
				Carbon black	1333-86-4	1.00	0.4565	
5	Plating	Matte-Tin	1.275	Tin	7440-31-5	100.00	0.523	0.523
Total weight			243.883					

**This Document was updated on: 2015/02/09**

(EU) RoHS Directive 2011/65/EU Application of lead which are exempted from the requirements:

7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead);

7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound.