


MATERIAL DECLARATION SHEET



Material Number	SMF4L series			
Product Line	Semiconductor Products			
Compliance Date	2018/08/28			
RoHS Compliant	Yes	MSL	1	

No	Construction Element(subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material\ Substances	CASRN	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
					if applicable			
1	Dice	Silicon	0.00062	Silicon	7440-21-3	59.42%	2.4152%	4.06%
				Phosphorous	7723-14-0	0.01%	0.0004%	
				Boron	7440-42-8	0.01%	0.0004%	
				Nickel	7440-02-0	14.80%	0.6016%	
				Gold	7440-57-5	0.76%	0.0309%	
				Lead ^(Note 2)	7439-92-1	12.50%	0.5081%	
				Silicon dioxide	7631-86-9	10.00%	0.4065%	
				Aluminum oxide	1344-28-1	2.50%	0.1016%	
2	Die Attach	Metal	0.0006086	Tin	7440-31-5	5.00%	0.1995%	3.99%
				Lead ^(Note 3)	7439-92-1	92.50%	3.6907%	
				Silver	7440-22-4	2.50%	0.0997%	
3	Lead frame	Copper	0.0068055	Copper	7440-50-8	99.80%	44.5273%	44.62%
				Iron	7439-89-6	0.15%	0.0669%	
				Phosphorus	7723-14-0	0.05%	0.0223%	
4	Molding compound	Epoxy material	0.0071124	Silicon dioxide	14808-60-7	76.00%	35.4377%	46.63%
				Epoxy resin	25928-94-3	12.00%	5.5954%	
				Phenolic resin	9003-35-4	11.00%	5.1291%	
				Carbon	1333-86-4	1.00%	0.4663%	
5	Plating	Matte-100% tin	0.0001068	Tin	7440-315	100.00%	0.7002%	0.70%
		Total weight	0.0152533					

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This Document was updated on: 2018/8/28

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. RoHS 7(c)-I exemption - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound
3. RoHS 7(a) exemption - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)