


MATERIAL DECLARATION SHEET



Material Number	P4SMA-Q			
Product Line	Semiconductor Products			
Compliance Date	2019/1/11			
RoHS Compliant	Yes	MSL	1	

No.	Construction Element(subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material\ Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Dice	Silicon	0.001330	Silicon	7440-21-3	60.18%	1.2800%	2.1269%
				Phosphorus	7723-14-0	0.01%	0.0002%	
				Boron	7440-42-8	0.01%	0.0002%	
				Nickel	7440-02-0	14.80%	0.3148%	
				Lead ^(Note2)	7439-92-1	12.50%	0.2659%	
				Silicon dioxide	7631-86-9	10.00%	0.2127%	
				Aluminum oxide	1344-28-1	2.50%	0.0532%	
2	High-melting point Solder paste	Solder paste	0.002003	Tin	7440-31-5	5.00%	0.1602%	3.2032%
				Lead ^(Note3)	7439-92-1	92.50%	2.9630%	
				Silver	7440-22-4	2.50%	0.0801%	
3	Lead frame	Copper	0.0275	Copper	7440-50-8	99.80%	43.8902%	43.9782%
				Iron	7439-89-6	0.15%	0.0660%	
				Phosphorus	7723-14-0	0.05%	0.0220%	
4	Molding compound	Epoxy material	0.031035	Silica	14808-60-7	76.00%	37.7199%	49.6314%
				Epoxy resin	25928-94-3	9.00%	4.4668%	
				Phenolic resin-A,B	9003-35-4	8.00%	3.9705%	
				Hydroxide metal	21645-51-2	6.00%	2.9779%	
				Carbon black	1333-86-4	1.00%	0.4963%	
5	Plating	Matte-100% tin	0.000663	Tin	7440-315	100.00%	1.0603%	1.0603%
		Total weight	0.062531					

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This Document was updated on: 2019/4/12

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. 7(c)-I 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. 7(a) Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)