

Material Composition Specification

SOT-223 Case (Eutectic Die Attach)



Device average mass 113 mg
 Fluctuation margin +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.95%	1.072	Si	7440-21-3	0.95%	1.072	9,487
bond wire	gold	0.05%	0.06	Au	7440-57-5	0.05%	0.06	531
leadframe	copper w/ silver plating	40.55%	45.82	Cu	7440-50-8	40.13%	45.35	401,327
				Fe	7439-89-6	0.04%	0.05	442
				P	7723-14-0	0.01%	0.015	113
				Ag	7440-22-4	0.36%	0.402	3,558
encapsulation*	EMC	56.48%	63.82	silica	7631-86-9	41.24%	46.6	412,389
				epoxy resin	Proprietary	13.43%	15.18	134,336
				Sb ₂ O ₃	1309-64-4	1.11%	1.256	11,115
				TBBA	79-94-7	0.55%	0.627	5,549
				carbon black	1333-86-4	0.14%	0.158	1,398
	EMC GREEN	56.48%	63.82	silica	60676-86-0	40.1%	45.31	401,000
				epoxy resin	29690-82-2	5.22%	5.904	52,248
				phenol resin	9003-35-4	5.22%	5.904	52,248
				carbon black	1333-86-4	0.28%	0.32	2,832
				metal hydroxide	1309-42-8	5.65%	6.38	56,460
plating**	tin/lead process	1.97%	2.23	Sn	7440-31-5	1.58%	1.785	15,796
				Pb	7439-92-1	0.39%	0.445	3,938
	matte tin	1.97%	2.23	Sn	7440-31-5	1.97%	2.23	19,735

*EMC GREEN molding compound is Halogen-Free.

**For Lead Free plating, add suffix "LEAD FREE" to part number.

For Tin/Lead plating, add suffix "TIN/LEAD" to part number.

No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.

Disclaimer

The information provided in this Material Composition data sheet is, to the best of our knowledge, correct. However, there is no guarantee to completeness or accuracy, as some information is derived from data sources outside the company.

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