


Material Composition Specification

SOT-223 Case (Eutectic Die Attach)

Pb (lead)-free plating** 

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%	1.07	Si	7440-21-3	0.95%	1.072	9,490
bond wire	gold	0.05%	0.06	Au	7440-57-5	0.05%	0.058	510
leadframe	Cu alloy w/ silver plating	40.55%	45.82	Cu	7440-50-8	40.19%	45.415	401,900
				Ag	7440-22-4	0.36%	0.402	3,560
encapsulation*	EMC	56.48%	63.82	silica	7631-86-9	41.24%	46.598	412,370
				epoxy resin	Proprietary	13.43%	15.179	134,330
				Sb ₂ O ₃	1309-64-4	1.11%	1.258	11,130
				TBBA	79-94-7	0.56%	0.628	5,560
				carbon	1333-86-4	0.14%	0.158	1,400
	EMC GREEN	56.48%	63.82	silica	7631-86-9	42.50%	48.017	424,927
				epoxy resin	Proprietary	13.84%	15.641	138,420
				carbon	1333-86-4	0.14%	0.163	1,443
plating**	tin lead process	1.98%	2.23	Sn	7440-31-5	1.55%	1.750	15,490
				Pb	7439-92-1	0.43%	0.481	4,260
	100% tin process	1.98%	2.23	Sn	7440-31-5	1.98%	2.232	19,750

*EMC GREEN molding compound is Halogen-Free.

**Specify Lead-Free when ordering 100% tin (Pb-free) plating.

Disclaimer

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

Material Composition Specification

SOT-223 Case (Solder Die Attach)

Pb (lead)-free plating** 

Device average mass 115 mg

Fluctuation margin +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	1.25%	1.43	Si	7440-21-3	1.25%	1.432	12,452
bond wire	gold	0.11%	0.13	Au	7440-57-5	0.11%	0.125	1,087
leadframe	Cu alloy w/silver plating	44.92%	51.66	Cu	7440-50-8	44.62%	51.314	446,209
				Ag	7440-22-4	0.30%	0.345	3,000
die attach	solder	0.34%	0.39	Pb	7439-92-1	0.32%	0.370	3,217
				Sn	7440-31-5	0.02%	0.020	174
				Ag	7440-22-4	0.00%	0.001	9
encapsulation*	EMC	51.45%	59.16	silica	7631-86-9	37.56%	43.196	375,617
				epoxy resin	Proprietary	12.24%	14.071	122,357
				Sb ₂ O ₃	1309-64-4	1.01%	1.166	10,139
				TBBA	79-94-7	0.51%	0.582	5,061
	EMC GREEN	51.45%	59.16	silica	7631-86-9	38.70%	44.511	387,053
				epoxy resin	Proprietary	12.61%	14.499	126,082
				carbon	1333-86-4	0.13%	0.151	1,317
plating**	tin lead process	1.94%	2.23	Sn	7440-31-5	1.52%	1.750	15,217
				Pb	7439-92-1	0.42%	0.481	4,183
	100% tin process	1.94%	2.23	Sn	7440-31-5	1.94%	2.231	19,400

*EMC GREEN molding compound is Halogen-Free.

**Specify Lead-Free when ordering 100% tin (Pb-free) plating.

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