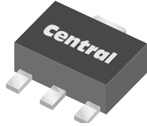
Material Composition Specification

SOT-89 Case



Eutectic Die Attach

Device average mass . . . . . . 51.391 mg (+/-10%)

Component	Material	Material (%wt)	Material (mg)	Substance	CAS No.	Substance (%wt)	Substance (mg)	Substance (ppm)
active device	doped Si	0.43%	0.222	Si	7440-21-3	0.43%	0.222	4,320
bond wire	gold or copper	0.06%	0.032	Au	7440-57-5	0.06%	0.032	623
				Cu	7440-50-8			
leadframe	copper w/ silver plating	49.47%	25.42	Cu	7440-50-8	49.27%	25.319	492,655
				Fe	7439-89-6	0.05%	0.025	486
				P	7723-14-0	0.02%	0.008	156
				Ag	7440-22-4	0.14%	0.07	1,362
encapsulation*	EMC	48.68%	25.02	silica	7631-86-9	36.02%	18.51	360,166
				epoxy resin	Proprietary	11.32%	5.82	113,245
				Sb_2O_3	1309-64-4	0.98%	0.502	9,768
				TBBA	79-94-7	0.24%	0.125	2,432
				carbon black	1333-86-4	0.12%	0.063	1,226
	EMC GREEN	48.68%	25.02	silica	60676-86-0	32.53%	16.72	325,336
				epoxy resin	29690-82-2	7.39%	3.8	73,940
				phenol resin	9003-35-4	3.72%	1.91	37,165
				carbon black	1333-86-4	0.25%	0.13	2,530
				metal hydroxide	1309-42-8	4.79%	2.46	47,866
plating**	tin/lead process	1.36%	0.697	Sn	7440-31-5	1.15%	0.592	11,519
				Pb	7439-92-1	0.2%	0.105	2,043
	matte tin	1.36%	0.697	Sn	7440-31-5	1.36%	0.697	13,562

*EMC GREEN molding compound is Halogen-Free.
**For Lead Free plating, add suffix “PB 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.

Epoxy Die Attach

Device average mass . . . . 51.493 mg (+/-10%)

Component	Material	Material (%wt)	Material (mg)	Substance	CAS No.	Substance (%wt)	Substance (mg)	Substance (ppm)
active device	doped Si	0.43%	0.222	Si	7440-21-3	0.43%	0.222	4,311
die attach	silver epoxy	0.19%	0.100	Ag	7440-22-4	0.17%	0.090	1,748
				high boiling methacrylate	7534-94-3	0.02%	0.010	194
bond wire	gold	0.06%	0.032	Au	7440-57-5	0.06%	0.032	621
leadframe	Cu alloy w/ silver plating	49.38%	25.42	Cu	7440-50-8	49.17%	25.319	491,698
				Fe	7439-89-6	0.05%	0.025	486
				P	7723-14-0	0.02%	0.008	155
				Ag	7440-22-4	0.14%	0.070	1,359
encapsulation	EMC GREEN	48.59%	25.02	silica	60676-86-0	32.47%	16.72	324,704
				epoxy resin	37382079-9	7.38%	3.80	73,796
				phenol resin	9003-35-4	3.71%	1.910	37,092
				carbon black	1333-86-4	0.25%	0.130	2,525
				metal hydroxide	1309-42-8	4.78%	2.460	47,773
plating	matte tin	1.35%	0.697	Sn	7440-31-5	1.35%	0.697	13,536

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.

R11 (17-July 2018)