

# Material Composition Specification

## TO-3 Case



Device average mass ..... 11.7 g  
 Fluctuation margin ..... +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.043%	5.0	Si	7440-21-3	0.043%	5.0	426
bond wire	aluminum	0.019%	2.2	Al	7429-90-5	0.019%	2.2	187
die attach	high temperature solder	0.037%	4.28	Pb	7439-92-1	0.034%	3.98	339
				Sn	7440-31-5	0.002%	0.2	17
				Ag	7440-22-4	0.001%	0.1	9
die coating*	silicone	4.9%	575	Al <sub>2</sub> O <sub>3</sub>	1344-28-1	3.56%	418	35,570
				poly-methylsiloxane	63148-62-9	1.34%	157	13,392
header	nickel plated iron	66.2%	7,745	Fe	7439-89-6	65.54%	7,668	655,385
				Ni	7440-02-0	0.62%	72	6,154
				P	7723-14-0	0.05%	5.4	462
can	nickel plated iron	21.79%	2,550	Fe	7439-89-6	21.57%	2,524	215,726
				Ni	7440-02-0	0.2%	23.7	2,026
				P	7723-14-0	0.02%	1.8	154
terminal plating	100% tin solder	7.36%	864	Sn	7440-31-5	7.36%	864	73,591

\*Die coating is not used on devices with a V<sub>CEO</sub> of less than 150 volts.

### 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.

R3 (20-September 2018)