Material Composition Specification

TO-39 Case

Device average mass . . . . 1006 mg

Fluctuation margin . . . . +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.497%	5.0	Si	7440-21-3	0.497%	5.0	4,970
bond wire	Al alloy	0.038%	0.39	Al	7429-90-5	0.038%	0.38	378
				Si	7440-21-3	0.001%	0.01	10
header	Kovar (Fe/Ni/Co alloy)	62.68%	630.6	Fe	7439-89-6	56.95%	572.87	569,453
				Ni	7440-02-0	2.531%	25.46	25,308
				Glass	Proprietary	1.491%	15	14,911
				Co	7440-48-4	1.143%	11.497	11,428
				Mn	7439-96-5	0.248%	2.492	2,477
				P	7723-14-0	0.085%	0.855	850
				Si	7440-21-3	0.073%	0.736	732
				Ag	7440-22-4	0.072%	0.72	716
				C	1333-86-4	0.05%	0.507	504
				Cu	7440-50-8	0.028%	0.28	278
				S	7704-34-9	0.015%	0.155	154
				N	7727-37-9	0.004%	0.038	38
can	metal alloy	34.79%	350	Fe	7439-89-6	34.67%	348.74	346,660
				Mn	7439-96-5	0.084%	0.85	845
				Al	7429-90-5	0.018%	0.18	179
				C	1333-86-4	0.016%	0.16	159
				S	7704-34-9	0.004%	0.04	40
				P	7723-14-0	0.003%	0.03	30
can plating	nickel	0.895%	9.0	Ni	7440-02-0	0.895%	9.0	8,946
plating*	tin/lead process	1.093%	11	Sn	7440-31-5	0.875%	9.0	8,748
				Pb	7439-92-1	0.219%	2.0	2,187
	100% tin process	1.093%	11	Sn	7440-31-5	1.093%	11	10,934

*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.

R2 (3-June 2011)