

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%	630.61	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
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 (inner layer)	nickel	1.06%	9.0	Ni	7440-02-0	1.06%	9.0	8,946
can plating (outer layer)	matte tin**	0.984%	9.9	Sn	7440-31-5	0.984%	9.9	9,841
lead free termination plating*	matte tin**	0.109%	1.1	Sn	7440-31-5	0.109%	1.1	1,093

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

**Contact the Central Semiconductor Sales Department for tin/lead plating 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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