

# Material Composition Specification

## TO-72 Case



Device average mass ..... 322.2 mg  
 Fluctuation margin ..... +/-10%

Component	Material	Material		Substance	CAS No.	Substance		
		(%wt)	(mg)			(%wt)	(mg)	(ppm)
active device	doped Si	0.16%	0.5	Si	7440-21-3	0.155%	0.5	1,552
die attach	silver epoxy	0.08%	0.27	epoxy resin	Proprietary	0.065%	0.21	652
				Ag	7440-22-4	0.019%	0.06	186
bond wire	aluminum	0.02%	0.06	Al	7429-90-5	0.019%	0.06	186
header	Kovar (Fe/Ni/Co alloy)	59.38%	191.32	Fe	7439-89-6	31.28%	100.8	312,849
				Ni	7440-02-0	21.6%	69.6	216,015
				Co	7440-48-4	3.98%	12.81	39,758
				Glass	Proprietary	2.002%	6.45	20,019
				Mn	7439-96-5	0.225%	0.725	2,250
				P	7723-14-0	0.101%	0.325	1,009
				Si	7440-21-3	0.084%	0.27	838
				Ag	7440-22-4	0.065%	0.21	652
				Cu	7440-50-8	0.025%	0.08	248
				C	7440-44-0	0.016%	0.05	155
can	alloy	35.34%	113.86	Fe	7439-89-6	35.23%	113.5	352,266
				Mg	7439-95-4	0.071%	0.23	714
				Al	7429-90-5	0.019%	0.06	186
				C	7440-44-0	0.016%	0.05	155
				P	7723-14-0	0.003%	0.01	31
				S	7783-14-4	0.003%	0.01	31
can plating (inner layer)	nickel	1.05%	3.39	Ni	7440-02-0	1.05%	3.39	10,521
can plating (outer layer)	matte tin**	3.575%	11.52	Sn	7440-31-5	3.575%	11.52	35,754
lead free termination plating*	matte tin**	0.397%	1.28	Sn	7440-31-5	0.397%	1.28	3,973

\*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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