

Product / Package Information

Package	Sidebrazed
Body Size	600 mils
Lead Count	28
Terminal Finish	Au

Environmental Information

RoHS Compliant	Yes
High Temperature Compatible	Yes
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes

Materials Declaration

Combo Lid

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other Ferrous alloys	Kovar		3.75E-01	92.0	920000	8.21	82096
Nickel & its alloys	Nickel	7440-02-0	1.63E-02	4.00	40000	0.36	3569
Precious metals	Gold	7440-57-5	1.63E-02	4.00	40000	0.36	3569
Subtotal			4.08E-01	100.00	1000000	8.92	89235

Lid Frame

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	3.18 E-02	79.58	795800	0.70	6962
Tin & its alloys	Tin	7440-31-5	8.17 E-03	20.42	204200	0.18	1786
Subtotal			4.00E-02	100.00	1000000	0.87	8749

Ceramic Package

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Ceramics							
Ceramics	Aluminum oxide	1344-28-1	3.37 E+00	90.50	905000	73.71	737111
Ceramics	Chromium oxide	1308-38-9	1.45 E-01	3.90	39000	3.18	31765
Ceramics	Silicon Dioxide	14808-60-7	1.30 E-01	3.50	35000	2.85	28507
Ceramics	Titanium dioxide	13463-67-7	3.72 E-02	1.00	10000	0.81	8145
Ceramics	Calcium oxide	1305-78-8	2.23 E-02	0.60	6000	0.49	4887
Ceramics	Magnesium oxide	1309-48-4	1.86 E-02	0.50	5000	0.41	4072
Subtotal			3.72 E+00	100.00	1000000	81.45	814488
Metallization							
Other inorganic materials	Tungsten	7440-33-7	4.83 E-02	96.61	966100	1.06	10565
Other inorganic materials	Molybdenum	7439-98-7	1.70 E-03	3.39	33900	0.04	371
Subtotal			5.00 E-02	100.0	1000000	1.09	10936
Leads							
Iron & its alloys	Iron	7439-89-6	1.51 E-01	58.0	580000	3.30	32982
Iron & its alloys	Nickel	7440-02-0	1.06 E-01	40.7	407000	2.31	23144
Iron & its alloys	Manganese	7439-96-5	2.08 E-03	0.8	8000	0.05	455
Iron & its alloys	Cobalt	7440-48-4	1.30 E-03	0.5	5000	0.03	284
Subtotal			2.60 E-01	100.0	1000000	5.69	56865
Ag-Cu Base Metal							
Precious metals	Silver	7440-22-4	8.50 E-03	85.0	850000	0.19	1859
Copper & its alloys	Copper	7440-50-8	1.50 E-03	15.0	150000	0.03	328
Subtotal			1.00 E-02	100.0	1000000	0.22	2187
Nickel Plating (1st coating)							
Nickel & its alloys	Nickel	7440-02-0	9.39 E-03	93.89	938900	0.21	2053
Nickel & its alloys	Palladium	7440-05-3	5.36 E-04	5.36	53600	0.01	117
Nickel & its alloys	Boron	7440-42-8	7.00 E-05	0.70	7000	0.0015	15
Nickel & its alloys	Lead	7439-92-1	5.00 E-06	0.05	500	0.0001	1
Subtotal			1.00 E-02	100.0	1000000	0.22	2187
Nickel Plating (2nd coating)							
Nickel & its alloys	Nickel	7440-02-0	9.20 E-03	92.00	920000	0.20	2012
Other inorganic materials	Cobalt	7440-48-4	8.00 E-04	8.00	80000	0.02	175
Subtotal			1.00 E-02	100.00	1000000	0.22	2187
Subtotal			4.06 E+00			88.89	888850

External Leadframe Plating

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Precious metals	Gold	7440-57-5	1.00 E-02	100.00	1000000	0.22	2187

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Aluminum	7429-90-5	1.20 E-03	100.0	1000000	0.03	262

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RoHS Compliant	No
High Temperature Compatible	No
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes

Materials Declaration

Combo Lid

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other Ferrous alloys	Kovar		3.68E-01	92.0	920000	7.72		77197
Nickel & its alloys	Nickel	7440-02-0	1.60E-02	4.00	40000	0.34		3356
Precious metals	Gold	7440-57-5	1.60E-02	4.00	40000	0.34		3356
Subtotal			4.00E-01	100.0	1000000	8.39		83910

Lid Frame

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Precious metals	Gold	7440-57-5	3.18 E-02	79.58	795800	0.67		6678
Tin & its alloys	Tin	7440-31-5	8.17 E-03	20.42	204200	0.17		1713
Subtotal			4.00E-02	100.00	1000000	0.84		8391

Ceramic Package

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Ceramics	Aluminum oxide	1344-28-1	3.18 E+00	77.97	779700	66.70		667006
Other ferrous alloys	Iron	7439-89-6	2.57 E-01	6.31	63100	5.40		53980
Nickel & its alloys	Nickel	7440-02-0	1.98 E-01	4.86	48600	4.16		41576
Other inorganic materials	Chromium	7440-47-3	1.47 E-01	3.6	36000	3.08		30797
Ceramics	Silicon Dioxide	14808-60-7	1.30 E-01	3.2	32000	2.74		27375
Other inorganic materials	Tungsten	7440-33-7	8.16 E-02	2	20000	1.71		17109
Ceramics	Calcium oxide	1305-78-8	2.45 E-02	0.6	6000	0.51		5133
Ceramics	Magnesium oxide	1309-48-4	2.04 E-02	0.5	5000	0.43		4277
Precious metals	Silver	7440-22-4	2.04 E-02	0.5	5000	0.43		4277
Other inorganic materials	Cobalt	7440-48-4	8.16 E-03	0.2	2000	0.17		1711
Precious metals	Gold	7440-57-5	6.52 E-03	0.16	1600	0.14		1369
Copper & its alloys	Copper	7440-50-8	4.08 E-03	0.1	1000	0.09		855
Subtotal			4.08 E+00	100.00	1000000	85.55		855465

External Leadframe Plating

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Tin & its alloys	Tin	7439-92-1	1.26 E-01	63.0	630000	2.64		26432
Tin & its alloys	Lead	7440-31-5	7.40 E-02	37.0	370000	1.55		15523
Subtotal			2.00 E-01	100.0	1000000	4.20		41955

Bond Wires

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Aluminum	7429-90-5	8.00 E-03	100.0	1000000	0.17		1678

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other inorganic materials	Doped Silicon	7440-21-3	3.30 E-02	100.0	1000000	0.69		6923

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level		
				Percentage (%)	PPM	Percentage (%)	PPM	
Other organic materials	Silver	7440-22-4	6.40 E-03	80.00	800000	0.13		1343
Polymer	Cyanate ester resin	Proprietary	1.60 E-03	20.00	200000	0.03		336
Subtotal			8.00 E-03	100.0	1000000	0.17		1678

Package Totals			Weight (g) 4.77 E+00			Percentage (%) 100.00		PPM 1000000
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Note: The information provided in this declaration are true to the best of ADI's knowledge. ADI derived most of the information listed in this declaration from documents provided by third parties, and assumes no liability to any inaccuracy of such information.



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Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	4.10 E-02	100.0	1000000	0.90	8967

Die Attach

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other organic materials	Silver	7440-22-4	6.40 E-03	80.00	800000	0.14	1400
Polymer	Cyanate ester resin	Proprietary	1.60 E-03	20.00	200000	0.03	350
Subtotal			8.00 E-03	100.0	1000000	0.17	1750

			Weight (g)			Percentage (%)	PPM
Package Totals			4.57 E+00			100.00	1000000

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