

Product / Package Information

Package	CQFP
Body Size (mm)	32 X 32
Lead Count	240
Terminal Finish	Au
MS Number	MS012778A

Environmental Information

RoHS Compliant	Yes
High Temperature Compliant	Yes
Halogen Free Compliant	Yes
REACH SVHC Compliant	Yes
Last Updated	3-Mar-19

Materials Declaration

Base							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Ceramic							
Ceramics	Aluminum oxide	1344-28-1	5.75E+00	90.0	900000	45.94	459445
Ceramics	Silicon Dioxide	14808-60-7	3.83E-01	6.0	60000	3.06	30630
Ceramics	Chromium oxide	1308-38-9	2.55E-01	4.0	40000	2.04	20420
Subtotal			6.39E+00	100.0	1000000	51.05	510495
Heat Spreader							
Copper and its alloys	Copper	7440-50-8	2.80E+00	90.0	900000	22.42	224183
Other non-ferrous metals and alloys	Tungsten	7440-33-7	3.12E-01	10.0	100000	2.49	24909
Subtotal			3.12E+00	100.0	1000000	24.91	249092
Leadframe							
Other Ferrous alloys	Iron	7439-89-6	9.77E-01	54.0	540000	7.81	78133
Other Ferrous alloys	Nickel	7440-02-0	5.25E-01	29.0	290000	4.20	41960
Other Ferrous alloys	Cobalt	7440-48-4	3.08E-01	17.0	170000	2.46	24597
Subtotal			1.81E+00	100.0	1000000	14.47	144691
Base Metal Coating							
Precious metals	Silver	7440-22-4	2.37E-01	85.0	850000	1.90	18958
Copper and its alloys	Copper	7440-50-8	4.19E-02	15.0	150000	0.33	3345
Subtotal			2.79E-01	100.0	1000000	2.23	22303
Subtotal			1.16E+01			92.66	926581

Lid							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Kovar							
Other Ferrous alloys	Iron	7439-89-6	1.09 E-01	53.00	530000	0.87	8728
Other Ferrous alloys	Nickel	7440-02-0	5.97 E-02	29.00	290000	0.48	4776
Other Ferrous alloys	Cobalt	7440-48-4	3.50 E-02	17.00	170000	0.28	2799
Other Ferrous alloys	Manganese	7439-96-5	1.24 E-03	0.60	6000	0.01	99
Other Ferrous alloys	Silicon	7440-21-3	8.24 E-04	0.40	4000	0.01	66
Subtotal			2.06 E-01	100.00	1000000	1.65	16468
Seal							
Glass	Tin	7440-31-5	6.40 E-03	80.00	800000	0.05	512
Precious metals	Gold	7440-57-5	1.60 E-03	20.00	200000	0.01	128
Subtotal			8.00 E-03	100.00	1000000	0.06	640
Subtotal			2.14 E-01			1.71	17107

External Leadframe Plating							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Nickel & its alloys	Nickel	7440-02-0	1.90 E-01	49.6	496084	1.52	15189
Precious metals	Gold	7440-57-5	1.93 E-01	50.4	503916	1.54	15428
Subtotal			3.83 E-01	100.0	1000000	3.06	30617

Bond Wires							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Aluminum & its alloys	Aluminum	7429-90-5	1.53 E-02	100.0	1000000	0.12	1224

Chip							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.88 E-01	100.0	1000000	2.30	23023

Die Attach							
Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other organic materials	Silver	7440-22-4	1.45 E-02	80.00	800000	0.12	1159
Polymer	Cyanate ester resin	Proprietary	3.62 E-03	20.00	200000	0.03	290
Subtotal			1.81 E-02	100.0	1000000	0.14	1449

Package Totals			Weight (g) 1.25 E+01			Percentage (%) 100.00	PPM 100000
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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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