Product / Package Information

Package	CSPBGA
Body Size (mm_	11 X 11
Lead Count	169
Terminal Finish	SnAgCu
Ball Size	0.40
MS Number	MS012141A + MS012529A

Environmental Compliance Information

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

Materials Declaration

Underfill

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	7631-86-9	3.32 E-03	60.00	600000	1.79	17866
Thermosets	Phenolic Polymer Resin	9003-36-5	1.11 E-03	20.00	200000	0.60	5955
Thermosets	Epoxy resin	Proprietary	5.54 E-04	10.00	100000	0.30	2978
Other inorganic materials	Hardener	Proprietary	5.54 E-04	10.00	100000	0.30	2978
Subtotal			5.54 E-03	100.00	1000000	2.98	29777

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Copper & its alloys	Copper Foil	7440-50-8	2.85 E-02	67.87	678700	15.31	153086
Other inorganic materials	Glass, oxide	65997-17-3	6.32 E-03	15.07	150700	3.40	33992
Other inorganic materials	Silicon dioxide	7631-86-9	3.94 E-03	9.38	93800	2.12	21157
Thermosets	Formaldehyde polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol]	28906-96-9	1.61 E-03	3.84	38400	0.87	8661
Thermosets	(1-Methylethylidene)di-4,1-phenylene cyanate homopolymer	25722-66-1	1.61 E-03	3.84	38400	0.87	8661
	Laminate Core Subtotal		4.20 E-02	100.00	1000000	22.56	225558
Thermoset	Cured Resin	Proprietary	7.13 E-03	72.10	721000	3.83	38348
Other inorganic materials	Barium sulfate	7727-43-7	2.07 E-03	20.90	209000	1.11	11116
Other inorganic materials	Talc	14807-96-6	4.16 E-04	4.20	42000	0.22	2234
Other inorganic materials	Additives	Proprietary	1.29 E-04	1.30	13000	0.07	691
Others	Misc	Proprietary	8.91 E-05	0.90	9000	0.05	479
Other organic materials	Silica	Proprietary	3.96 E-05	0.40	4000	0.02	213
Other inorganic materials	Colorant	Proprietary	1.98 E-05	0.20	2000	0.01	106
	Soldermask Subtotal		9.89 E-03	100.00	1000000	5.319	53188
Thermoset	Cured Resin	Proprietary	1.03 E-03	75.50	755000	0.55	5513
Other organic materials	Barium sulfate	7727-43-7	2.83 E-04	20.80	208000	0.15	1519
Other inorganic materials	Talc	14807-96-6	2.85 E-05	2.10	21000	0.02	153
Others	Antifoamer and Leveling agent	Proprietary	9.51 E-06	0.70	7000	0.01	51
Other inorganic materials	Silica	Proprietary	6.79 E-06	0.50	5000	0.00	37
Other inorganic materials	Phthalocyanine blue	147-14-8	2.72 E-06	0.20	2000	0.001	15
Other inorganic materials	Organic pigment	Proprietary	2.72 E-06	0.20	2000	0.001	15
	Soldermask Dam Subtotal		1.36 E-03	100.00	1000000	0.73	7302
Tin & its alloys	Tin	7440-31-5	5.02 E-04	96.50	965000	0.27	2697
Tin & its alloys	Silver	7440-22-4	1.56 E-05	3.00	30000	0.008	84
Tin & its alloys	Copper	7440-50-8	2.60 E-06	0.50	5000	0.001	14
	SOP Subtotal		5.20 E-04	100.00	1000000	0.279	2795
Copper & its alloys	Copper	7440-50-8	5.21 E-02	100.00	1000000	28.00	280016
Subtotal			1.06 E-01			56.89	568859

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	4.05 E-02	96.50	965000	21.75	217532
Tin & its alloys	Silver	7440-22-4	1.26 E-03	3.00	30000	0.68	6763
Tin & its alloys	Copper	7440-50-8	2.10 E-04	0.50	5000	0.11	1127
Subtotal			4.19 E-02	100.0	1000000	22.54	225422

Solder Bump

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	1.05 E-02	98.2	982000	5.62	56239
Tin & its alloys	Silver	7440-22-4	1.92 E-04	1.8	18000	0.10	1031
Subtotal			1.07 E-02	100.0	1000000	5.73	57270

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.16 E-02	100.0	1000000	11.62	116205

Polyimide

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other organic materials	Resin	Proprietary	5.64 E-06	67.95	679500	0.0030	30
Other organic materials	Tetraethylene Glycol Dimethacrylate	109-17-1	1.21 E-06	14.56	145600	0.0006	6
Other organic materials	Trifluoroacetic Anhydride	407-25-0	4.84 E-07	5.83	58300	0.0003	3
Other organic materials	4,4'-Oxydiphthalic Anhydride	1823-59-2	4.84 E-07	5.83	58300	0.0003	3
Other organic materials	2-Hydroxyethyl Methacrylate	868-77-9	4.84 E-07	5.83	58300	0.0003	3
Subtotal			8.30 E-06	100.00	1000000	0.00	45

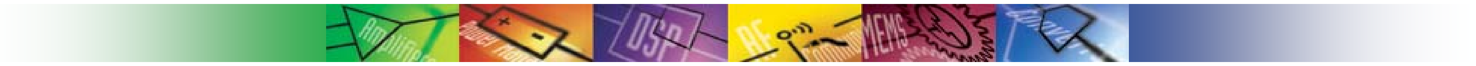
UBM

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Nickel and its alloys	Nickel	7440-02-0	4.09 E-04	90.83	908324	0.22	2200
Copper & its alloys	Copper	7440-50-8	3.09 E-05	6.86	68590	0.02	166
Other non-ferrous metals and alloys	Titanium	7440-32-6	1.04 E-05	2.31	23085	0.01	56
Subtotal			4.51 E-04	100.00	1000000	0.24	2422

	Weight (g)	Percentage (%)	PPM
Package Totals	**1.86 E-01**	**100.00**	**1000000**

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.

ADI Proprietary



Product / Package Information

Package	CSPBGA
Body Size (mm_	11 X 11
Lead Count	169
Terminal Finish	SnPb
Ball Size	0.40
MS Number	MS012311A + MS012528A

Environmental Compliance Information

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

Materials Declaration

Underfill

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Silicon dioxide	7631-86-9	3.32 E-03	60.00	600000	1.79	17866
Thermosets	Phenolic Polymer Resin	9003-36-5	1.11 E-03	20.00	200000	0.60	5955
Thermosets	Epoxy resin	Proprietary	5.54 E-04	10.00	100000	0.30	2978
Other inorganic materials	Hardener	Proprietary	5.54 E-04	10.00	100000	0.30	2978
Subtotal			5.54 E-03	100.00	1000000	2.98	29777

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Copper & its alloys	Copper Foil	7440-50-8	2.85 E-02	67.87	678700	15.31	153086
Other inorganic materials	Glass, oxide	65997-17-3	6.32 E-03	15.07	150700	3.40	33992
Other inorganic materials	Silicon dioxide	7631-86-9	3.94 E-03	9.38	93800	2.12	21157
Thermosets	Formaldehyde polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol]	28906-96-9	1.61 E-03	3.84	38400	0.87	8661
Thermosets	(1-Methylethylidene)di-4,1-phenylene cyanate homopolymer	25722-66-1	1.61 E-03	3.84	38400	0.87	8661
	Laminate Core Subtotal		4.20 E-02	100.00	1000000	22.56	225558
Thermoset	Cured Resin	Proprietary	7.13 E-03	72.10	721000	3.83	38348
Other inorganic materials	Barium sulfate	7727-43-7	2.07 E-03	20.90	209000	1.11	11116
Other inorganic materials	Talc	14807-96-6	4.16 E-04	4.20	42000	0.22	2234
Other inorganic materials	Additives	Proprietary	1.29 E-04	1.30	13000	0.07	691
Others	Misc	Proprietary	8.91 E-05	0.90	9000	0.05	479
Other organic materials	Silica	Proprietary	3.96 E-05	0.40	4000	0.02	213
Other inorganic materials	Colorant	Proprietary	1.98 E-05	0.20	2000	0.01	106
	Soldermask Subtotal		9.89 E-03	100.00	1000000	5.319	53188
Thermoset	Cured Resin	Proprietary	1.03 E-03	75.50	755000	0.55	5513
Other organic materials	Barium sulfate	7727-43-7	2.83 E-04	20.80	208000	0.15	1519
Other inorganic materials	Talc	14807-96-6	2.85 E-05	2.10	21000	0.02	153
Others	Antifoamer and Leveling agent	Proprietary	9.51 E-06	0.70	7000	0.01	51
Other inorganic materials	Silica	Proprietary	6.79 E-06	0.50	5000	0.00	37
Other inorganic materials	Phthalocyanine blue	147-14-8	2.72 E-06	0.20	2000	0.001	15
Other inorganic materials	Organic pigment	Proprietary	2.72 E-06	0.20	2000	0.001	15
	Soldermask Dam Subtotal		1.36 E-03	100.00	1000000	0.73	7302
Tin & its alloys	Tin	7440-31-5	5.02 E-04	96.50	965000	0.27	2697
Tin & its alloys	Silver	7440-22-4	1.56 E-05	3.00	30000	0.008	84
Tin & its alloys	Copper	7440-50-8	2.60 E-06	0.50	5000	0.001	14
	SOP Subtotal		5.20 E-04	100.00	1000000	0.279	2795
Copper & its alloys	Copper	7440-50-8	5.21 E-02	100.00	1000000	28.00	280016
Subtotal			1.06 E-01			56.89	568859

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	2.64 E-02	63.00	630000	14.20	142016
Tin & its alloys	Lead	7439-92-1	1.55 E-02	37.00	370000	8.34	83406
Subtotal			4.19 E-02	100.0	1000000	22.54	225422

Solder Bump

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	1.05 E-02	98.2	982000	5.62	56239
Tin & its alloys	Silver	7440-22-4	1.92 E-04	1.8	18000	0.10	1031
Subtotal			1.07 E-02	100.0	1000000	5.73	57270

Chip

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other inorganic materials	Doped Silicon	7440-21-3	2.16 E-02	100.0	1000000	11.62	116205

Polyimide

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
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Other organic materials	Resin	Proprietary	5.64 E-06	67.95	679500	0.0030	30
Other organic materials	Tetraethylene Glycol Dimethacrylate	109-17-1	1.21 E-06	14.56	145600	0.0006	6
Other organic materials	Trifluoroacetic Anhydride	407-25-0	4.84 E-07	5.83	58300	0.0003	3
Other organic materials	4,4'-Oxydiphthalic Anhydride	1823-59-2	4.84 E-07	5.83	58300	0.0003	3
Other organic materials	2-Hydroxyethyl Methacrylate	868-77-9	4.84 E-07	5.83	58300	0.0003	3
Subtotal			8.30 E-06	100.00	1000000	0.004	45

UBM

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Nickel and its alloys	Nickel	7440-02-0	4.09 E-04	90.83	908324	0.22	2200
Copper & its alloys	Copper	7440-50-8	3.09 E-05	6.86	68590	0.02	166
Other non-ferrous metals and alloys	Titanium	7440-32-6	1.04 E-05	2.31	23085	0.01	56
Subtotal			4.51 E-04	100.00	1000000	0.24	2422

	Weight (g)	Percentage (%)	PPM
Package Totals	**1.86 E-01**	**100.00**	**1000000**

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ANALOG DEVICES
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