Product / Package Information

Package	CSPBGA
Body Size	8 X 8 mm
Lead Count	165
Terminal Finish	SnAgCu
Ball Size	0.30
MS Number	MS012026A + MS012528A

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	Filler	7631-86-9	3.32 E-03	60.00	600000	3.25	32526
Other organic materials	Bisphenol F type liquid epoxy resin	9003-36-5	1.11 E-03	20.00	200000	1.08	10842
Other organic materials	Epoxy Resin	Proprietary	5.54 E-04	10.00	100000	0.54	5421
Other inorganic materials	Hardener	Proprietary	5.54 E-04	10.00	100000	0.54	5421
Subtotal			5.54 E-03	100.00	1000000	5.42	54210

Laminate

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Other organic materials	Organic resin	Proprietary	3.36 E-03	23.00	230000	3.28	32837
Other inorganic materials	Inorganic filler	7631-86-9	3.79 E-03	26.00	260000	3.71	37120
Other inorganic materials	Glass fiber	65997-17-3	7.44 E-03	51.00	510000	7.28	72813
	Laminate Core Subtotal		1.46 E-02	100.00	1000000	14.28	142771
Thermoset	Cured Resin	Proprietary	3.04 E-03	72.10	721000	2.97	29703
Other inorganic materials	Barium sulfate	7727-43-7	8.76 E-04	20.80	208000	0.86	8569
Other inorganic materials	Talc	14807-96-6	1.77 E-04	4.20	42000	0.17	1730
Others	Antifoamer and Leveling agent	Proprietary	7.58 E-05	1.80	18000	0.07	742
Other inorganic materials	Silica	Proprietary	2.11 E-05	0.50	5000	0.02	206
Other organic materials	Organic pigment	Proprietary	1.68 E-05	0.40	4000	0.02	165
Other organic materials	Phthalocyanine blue	Proprietary	8.42 E-06	0.20	2000	0.01	82
	Soldermask Subtotal		4.21 E-03	100.00	1000000	4.120	41197
Thermoset	Cured Resin	Proprietary	1.07 E-03	75.50	755000	1.05	10491
Other organic materials	Barium sulfate	7727-43-7	2.95 E-04	20.80	208000	0.29	2890
Other inorganic materials	Talc	14807-96-6	2.98 E-05	2.10	21000	0.03	292
Others	Antifoamer and Leveling agent	Proprietary	9.94 E-06	0.70	7000	0.01	97
Other inorganic materials	Silica	Proprietary	7.10 E-06	0.50	5000	0.01	69
Other inorganic materials	Phthalocyanine blue	147-14-8	2.84 E-06	0.20	2000	0.003	28
Other inorganic materials	Organic pigment	Proprietary	2.84 E-06	0.20	2000	0.003	28
	Soldermask Dam Subtotal		1.42 E-03	100.00	1000000	1.39	13895
Tin & its alloys	Tin	7440-31-5	3.76 E-04	96.50	965000	0.37	3683
Tin & its alloys	Silver	7440-22-4	1.17 E-05	3.00	30000	0.011	114
Tin & its alloys	Copper	7440-50-8	1.95 E-06	0.50	5000	0.002	19
	SOP Subtotal		3.90 E-04	100.00	1000000	0.382	3816
Copper & its alloys	Copper	7440-50-8	2.60 E-02	100.00	1000000	25.48	254815
Subtotal			4.67 E-02			45.65	456495

Solder Ball

Description	Substance	CAS#	Weight (g)	Homogeneous Material Level		Component Level	
				Percentage (%)	PPM	Percentage (%)	PPM
Tin & its alloys	Tin	7440-31-5	1.67 E-02	96.50	965000	16.31	163081
Tin & its alloys	Silver	7440-22-4	5.18 E-04	3.00	30000	0.51	5070
Tin & its alloys	Copper	7440-50-8	8.64 E-05	0.50	5000	0.08	845
Subtotal			1.73 E-02	100.0	1000000	16.90	168996

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	10.24	102383
Tin & its alloys	Silver	7440-22-4	1.92 E-04	1.8	18000	0.19	1877
Subtotal			1.07 E-02	100.0	1000000	10.43	104260

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	21.15	211550

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	0.0055	55
Other organic materials	Tetraethylene Glycol Dimethacrylate	109-17-1	1.21 E-06	14.56	145600	0.0012	12
Other organic materials	Trifluoroacetic Anhydride	407-25-0	4.84 E-07	5.83	58300	0.0005	5
Other organic materials	4,4'-Oxydiphthalic Anhydride	1823-59-2	4.84 E-07	5.83	58300	0.0005	5
Other organic materials	2-Hydroxyethyl Methacrylate	868-77-9	4.84 E-07	5.83	58300	0.0005	5
Subtotal			8.30 E-06	100.00	1000000	0.01	81

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	0.40	4004
Copper & its alloys	Copper	7440-50-8	3.09 E-05	6.86	68590	0.03	302
Other non-ferrous metals and alloys	Titanium	7440-32-6	1.04 E-05	2.31	23085	0.01	102
Subtotal			4.51 E-04	100.00	1000000	0.44	4408

			Weight (g)			Percentage (%)	PPM
Package Totals			**1.02 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.

ANALOG DEVICES
AHEAD OF WHAT'S POSSIBLE™