



Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
(503) 268-8000
custreq@lsc.com

Package: 1152 fcBGA (organic) with Eu (Sn63/Pb37) Solder Balls
Total Device Weight 10.36 Grams

SC40 version
MSL: 4
Peak Reflow Temp: 225°C

December, 2010	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	2.01%	0.208			Silicon (Si)	7440-21-3	Die Size: SC40: 13.60 x 13.07mm
Bumps	0.095%	0.0098	0.092% 0.002%	0.0095 0.0003	Tin (Sn) Silver (Ag)	7440-31-5 7440-22-4	97.4% 2.6%
Lid	52.06%	5.392	51.805% 0.260%	5.365 0.027	Copper (Cu) Nickel (Ni)	7440-50-8 7440-02-0	99.5% 0.5%
Adhesive	0.77%	0.080	0.695% 0.077%	0.072 0.008	Alumina Others	1344-28-1 Trade Secret	90% 10%
Underfill	0.38%	0.039	0.019% 0.038% 0.049% 0.038% 0.211% 0.004% 0.019%	0.0020 0.0039 0.0051 0.0039 0.0218 0.0004 0.0020	Bisphenol A type liquid epoxy resin Bisphenol F type liquid epoxy resin Naphthalene Amine type accelerator Silicon dioxide Carbon black Additives	25068-38-6 9003-36-5 27610-48-6 Trade Secret 60676-86-0 1333-86-4 Trade Secret	5% 10% 13% 10% 56% 1% 5%
Thermally conductive adhesive	0.68%	0.070	0.575% 0.101%	0.060 0.011	Aluminum (Al) Resin and additive mixture	7429-90-5 Trade Secret	85% 15%
Solder Balls	9.28%	0.961	5.847% 3.434%	0.606 0.356	Tin (Sn) Lead(Pb)	7440-31-5 7439-92-1	63% 37%
Substrate	34.72%	3.596	7.535% 13.611% 13.577%	0.780 1.408 1.407	Glass fiber Resin and additive mixture Copper(Cu)	65997-17-3 Trade Secret 7440-50-8	21.7% 39.2% 39.1%

Notes:

The values listed above are nominal values based on the data provided by outside sources and have not been validated.
Constituent substances and proportions in epoxy materials are before curing.
The information provided above is representative of the package as of the date listed, and is subject to change at any time.
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