Device Material Content

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Package: 48 TQFP (1.0mm) with matte Sn Plating
Total Device Weight 0.14 Grams

Copper wire version
MSL: 3
Peak Reflow Temp: 260°C

June, 2012	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	2.12%	0.0030			Silicon chip	7440-21-3	Die size: 2.00 x 2.20 mm
Mold	70.71%	0.0990					Mold Compound Density between 1.7 and 2.1 grams/cc
			60.10%	0.0841	Silica Fused	60676-86-0	75 to 95% (LSC uses 85% in our calculation)
			4.24%	0.0059	Epoxy Resin	-	3 to 10% (LSC uses 6% in our calculation)
			3.54%	0.0049	Phenol Resin	-	2 to 8% (LSC uses 5% in our calculation)
			0.28%	0.0004	Carbon black	1333-86-4	0.1 to 0.5% (LSC uses 0.4% in our calculation)
			2.55%	0.0036	Other (trade secret)	-	0 to 5% (LSC uses 3.6% in our calculation)
D/A Epoxy	0.32%	0.0004					
			0.26%	0.00036	Silver (Ag)	7440-22-4	Die attach epoxy Density: 4 grams/cc
			0.06%	0.00009	Other	-	(silver content: 70-90%; LSC uses 80% in our calculation)
Wire	0.46%	0.0007			Copper (Cu)	7440-50-8	1 wire per package lead; wire length 3 mm
Lead Plating	4.06%	0.0057			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is 0.015mm
Leadframe	22.32%	0.0313					Leadframe thickness is nominal (per Case Outline)
			21.47%	0.0301	Copper (Cu)	7440-50-8	96.2% Cu
			0.67%	0.0009	Nickel (Ni)	7440-02-0	3% Ni
			0.15%	0.00020	Silicon (Si)	7440-21-3	0.65% Si
			0.03%	0.00005	Magnesium (Mg)	7439-95-4	0.15% Mg

Notes:
The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.
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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Rev. A