Device Material Content

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Package: 48 TQFP (1.4mm) with matte Sn Plating
Total Device Weight 0.18 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	2.05%	0.0037			Silicon chip	7440-21-3	Die size: 2.00 x 2.20 mm
Mold	77.00%	0.1386					Mold Compound Density between 1.7 and 2.1 grams/cc
			65.45%	0.1178	Silica Fused	60676-86-0	80 to 90% Silica Fused (LSC uses 85% in our calculation)
			4.62%	0.0083	Epoxy Resin	-	5 to 10% Epoxy Resin (LSC uses 6% in our calculation).
			3.85%	0.0069	Phenol Resin	-	5 to 10% Phenol Resin (LSC uses 5% in our calculation).
			0.31%	0.0006	Carbon black	1333-86-4	0.1 to 1% Carbon black (LSC uses 0.4% in our calculation)
			2.77%	0.0050	Other (trade secret)	-	1 to 4% Other (LSC uses 3.6% in our calculation)
D/A Epoxy	0.25%	0.0004					
			0.20%	0.00036	Silver (Ag)	7440-22-4	(silver content: 70-90%; LSC uses 80% in our calculation)
			0.05%	0.00009	other	-	Die attach epoxy Density: 4 grams/cc
Wire	0.36%	0.0007			Copper (Cu)	7440-50-8	1 wire for each package lead; wire length 3 mm
Lead Plating	2.98%	0.0054			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is 0.015mm
Leadframe	17.36%	0.0313					Leadframe thickness is nominal (per Case Outline)
			16.70%	0.0301	Copper (Cu)	7440-50-8	96.2% Cu
			0.52%	0.00094	Nickel (Ni)	7440-02-0	3% Ni
			0.11%	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