



Device Material Content

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Package: 100 TQFP (1.4mm) with SnPb Plating
Total Device Weight 0.65 Grams

MSL: 3
Peak Reflow Temp: 240°C

March, 2011	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	3.61%	0.023			Silicon chip	7440-21-3	Die size: 4.3 x 6.5 mm
Mold	74.58%	0.485	63.39%	0.412	Silica Fused	60676-86-0	Mold Compound Density between 1.7 and 2.1 grams/cc 80 to 90% Silica Fused (LSC uses 85% in our calculation) 3 to 10% Epoxy Resin (LSC uses 5% in our calculation). 2 to 10% Phenol Resin (LSC uses 5% in our calculation). 0.1 to 1% Antimony Trioxide (LSC uses 0.6% in our calculation) 0.1 to 1% Carbon black (LSC uses 0.6% in our calculation) 0 to 5% Other (LSC uses 3.8% in our calculation)
			3.73%	0.024	Epoxy Resin	-	
			3.73%	0.024	Phenol Resin	-	
			0.45%	0.003	Antimony Trioxide	1309-64-4	
			0.45%	0.003	Carbon black	1333-86-4	
			2.83%	0.018	Other (trade secret)	-	
D/A Epoxy	0.44%	0.003	0.35%	0.0023	Silver-filled epoxy		Die attach epoxy Density: 4 grams/cc (silver content: 70-90%; LSC uses 80% in our calculation)
			0.09%	0.0006	Silver (Ag) other	7440-22-4 -	
Wire	0.45%	0.003			Gold (Au)	7440-57-5	0.8 to 1.2 mil diameter; 1 wire per package lead; wire length 3 mm
Lead Plating	1.69%	0.012	1.44%	0.009	Tin (Sn)	7440-31-5	Plating is 85% Sn, 15% Pb; thickness is 0.015mm
			0.25%	0.002	Lead (Pb)	7439-92-1	
Leadframe	19.23%	0.125	18.75%	0.1219	Copper (Cu)	7440-50-8	Leadframe thickness is nominal (per Case Outline) Cu (LSC uses 97.5% in our calculation) 0 to 0.65% Si (LSC uses 0.4% in our calculation) 0 to 0.2% Zn (LSC uses 0.1% in our calculation) 0 to 0.25% Sn (LSC uses 0.2% in our calculation) 0 to 0.3% Cr (LSC uses 0.2% in our calculation) 0 to 3% Ni (LSC uses 1.5% in our calculation) 0 to 0.15% Mg (LSC uses 0.1% in our calculation)
			0.08%	0.0005	Silicon (Si)	7440-21-3	
			0.02%	0.00013	Zinc (Zn)	7440-66-6	
			0.04%	0.0003	Tin (Sn)	7440-31-5	
			0.04%	0.0003	Chromium (Cr)	7440-47-3	
			0.29%	0.0019	Nickel (Ni)	7440-02-0	
			0.02%	0.00013	Magnesium (Mg)	7439-95-4	

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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