Device Material Content

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Package: **128 PQFP** **with matte Sn Plating**

Total Device Weight **5.30** **Grams**

MSL: 3
Peak Reflow Temp: 245°C

August, 2008	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	1.92%	0.102			Silicon chip	7440-21-3	Die size: 7.4mm x 9.3mm
Mold	86.45%	4.582					Mold Compound Density varies between 1.7 and 2.3 grams/cc
			75.21%	3.986	Silica Fused	60676-86-0	75 to 95% Silica (LSC uses 87% in our calculation)
			6.48%	0.344	Epoxy Resin	-	5 to 10% Epoxy Resin (LSC uses 7.5% in our calculation)
			4.32%	0.229	Phenol Resin	-	3 to 8% Phenol Resin (LSC uses 5% in our calculation)
			0.43%	0.023	Carbon Black	1333-86-4	0.1-0.5% Carbon Black (LSC uses 0.5% in our calculation)
D/A Epoxy	0.13%	0.007			Silver-filled Epoxy		
			0.11%	0.0056	Silver (Ag)	7440-22-4	(silver content: 70-90%; LSC uses 80% in our calculation)
			0.03%	0.0014	other	-	Die attach epoxy Density: 4 grams/cc
Wire	0.07%	0.004			Gold (Au)	7440-57-5	1.0 mil wire diameter; 1 wire for each package lead; wire length 3 mm
Lead Plating	0.54%	0.029			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is 0.015mm
Leadframe	10.89%	0.577					Leadframe thickness is nominal (per Case Outline)
			10.47%	0.555	Copper (Cu)	7440-50-8	96.2% Cu
			0.327%	0.0173	Nickel (Ni)	7440-02-0	3.0% Ni
			0.071%	0.004	Silicon (Si)	7440-21-3	0.65% Si
			0.016%	0.0009	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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