Lattice Semiconductor Corporation

Device Material Content

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Package: **48 QFNS** **with matte Sn Plating**
Total Device Weight **0.15** **Grams**

MSL: 3
Peak Reflow Temp: 260°C

July, 2009	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	3.50%	0.005			Silicon chip	7440-21-3	Die size: 3.0 x 3.0 mm
Mold	49.24%	0.074					Mold Compound Density ranges between 1.9 and 2.1 grams/cc
			43.33%	0.065	Silica (fused)	60676-86-0	75 to 95% Fused silica filler (LSC uses 88% in our calculation)
			2.46%	0.0037	Epoxy Resin	-	2 to 10% Epoxy resin (LSC uses 5% in our calculation)
			2.46%	0.0037	Phenol Resin	-	2 to 10% Phenol resin (LSC uses 5% in our calculation)
			0.86%	0.0013	Metal Hydroxide	-	0.5 to 2.5% Metal hydroxide (LSC uses 1.75% in our calculation)
			0.12%	0.0002	Carbon Black	1333-86-4	0.1 to 0.5% Carbon Black (LSC uses 0.25% in our calculation)
D/A Epoxy	0.61%	0.0009					Die attach epoxy Density: 4 grams/cc
			0.46%	0.0007	Silver (Ag)	7440-22-4	70 to 80% Silver (LSC uses 75% in our calculation)
			0.15%	0.0002	Organic esters and resins	-	20 to 30% Organic Resins, Hardners and Elastomers (LSC uses 25% in our calculation)
Wire	0.72%	0.0011			Gold (Au)	7440-57-5	Assume 1 wire per lead
Plating	0.34%	0.0005			Tin (Sn)	7440-31-5	Tin plating is 400 to 800 microinches (LSC uses 600 microinches in our calculation)
Leadframe	45.60%	0.068			Copper (Cu)	7440-50-8	

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.

www.latticesemi.com

Pb lead-free

RoHS 2002/95/EC

Rev. A