Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
(503) 268-8000

Package: **20 PLCC** **with Matte Sn Plating**

Total Device Weight **0.70** **Grams**

August, 2008	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	Notes / Assumptions:
Die	0.46%	0.003			Silicon chip	7440-21-3	Die size: 1.63 x 1.68 mm
Mold	83.52%	0.585					Mold Compound Density between 1.7 and 2.1 grams/cc
			73.24%	0.513	Silica Fused	60676-86-0	75 to 95% Silica Fused (LSC uses 87.7% in our calculation)
			4.18%	0.029	Epoxy Resin	-	2 to 8% Epoxy Resin (LSC uses 5% in our calculation).
			4.18%	0.029	Phenol Resin	-	3 to 8% Phenol Resin (LSC uses 5% in our calculation).
			1.67%	0.012	Epoxy Cresol Novolac	9003-35-4	0 to 3% Epoxy Cresol Novolac (LSC uses 2% in our calculation).
			0.25%	0.002	Carbon black	1333-86-4	0.1 to 0.5% Carbon black (LSC uses 0.3% in our calculation)
D/A Epoxy	0.04%	0.0003					Die attach epoxy Density: 4 grams/cc
			0.03%	0.0002	Silver (Ag)	7440-22-4	Silver content: 60-100% (LSC uses 80% in our calculation)
			0.01%	0.0001	other	-	
Wire	0.08%	0.0006			Gold (Au)	7440-57-5	1.00 mil diameter; 1 wire per package lead; wire length 3 mm
Lead Plating	0.64%	0.004			Tin (Sn)	7440-31-5	Plating is 100% Sn; thickness is >10.2um
Leadframe	15.26%	0.107					Leadframe thickness is nominal (per Case Outline)
			15.033%	0.105	Copper (Cu)	7440-50-8	Cu (LSC uses 98.5% in our calculation)
			0.191%	0.0013	Iron (Fe)	7439-89-6	0 to 2.35% Fe (LSC uses 1.25% in our calculation)
			0.005%	0.00003	Phosphorus (P)	7723-14-0	0 to 0.07% P (LSC uses 0.03% in our calculation)
			0.021%	0.00015	Zinc (Zn)	7440-66-6	0.12 to 0.15% Zn (LSC uses 0.14% in our calculation)
			0.012%	0.00009	Zirconium (Zr)	7440-67-7	0 to 0.15% Zr (LSC uses 0.08% in our calculation)

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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