

**Package Weight and Material Composition**

Rev JX

**Customer :** Nordic / nRF8002-R1Q32

**Date:** 4/3/2012

**Prepared by :** Ly-anne Marcelo

**Package:** Saw MLF 5x5x0.85 32lds

**Pad/cavity size:** 3.900 x 3.900 mm

	Name	Composition	%	gms	Density	gms	%	PPM
<b>Molding Compound</b>	Sumitomo EME G700 (Green)				1.95	<b>0.02722</b>	<b>35.53%</b>	<b>355,285</b>
	Resin Type	Epoxy resin	Resin %	9.0	0.002450		3.20%	31,976
	Filler Type	SiO2	Filler %	84.0	0.022865		29.84%	298,439
		Phenol Resin	%	6.50	0.001769		2.31%	23,093
		Carbon Black	%	0.50	0.000136		0.18%	1,776
<b>Frame</b>	C194FH				8.9	<b>0.04005</b>	<b>52.28%</b>	<b>522,776</b>
		Cu		97.44	0.039029		50.94%	509,406
		Fe		2.35	0.000941		1.23%	12,285
		Zn		0.13	0.000050		0.07%	653
		P		0.08	0.000033		0.04%	431
<b>Frame Plating</b>	Ag				Avg. Density	<b>0.00090</b>	<b>1.17%</b>	<b>11,696</b>
		Ag		0.000896	10.50		1.17%	11,696
<b>Die</b>						<b>0.00522</b>	<b>6.81%</b>	<b>68,073</b>
Die #1	Silicon			0.005216	2.4		6.807%	68,073
<b>Die Attach</b>						<b>0.00133</b>	<b>1.73%</b>	<b>17,313</b>
Die #1	CRM 1085A	Resin	16	0.000212	4.5		0.28%	2,770
		Ag	84	0.001114			1.45%	14,543
<b>Wire</b>						<b>0.00039</b>	<b>0.51%</b>	<b>5,086</b>
Wire Dia(mm)	0.020	Cu		99.9900	0.000390		0.509%	5,086
		Ag		0.0030	0.000000		0.000%	0
		Ca		0.0020	0.000000		0.000%	0.102
		Ni		0.0015	0.000000		0.000%	0.076
		S		0.0012	0.000000		0.000%	0.061
		Fe		0.0010	0.000000		0.000%	0.051
		Al		0.0010	0.000000		0.000%	0.051
		Others		0.0003	0.000000		0.000%	0.015
<b>External Plating</b>	Sn	Sn			Avg. Density	<b>0.00151</b>	<b>1.98%</b>	<b>19,771</b>
		Sn		0.001515	7.30		1.977%	19,771
						<b>0.077</b>	<b>100.00%</b>	<b>1000000</b>



Shaded blocks calculated per RoHS requirements

**Disclaimer**

The calculators identified in this report are used solely for determining package and weight composition and not for any other purpose, including but not limited to RoHS compliance. These calculators are used at the request of Customer in accordance with Amkor's current Terms and Conditions. Customer acknowledges that certain data used to generate the package and weight composition are provided by third parties and may not be validated and as such, the associated calculations performed herein are unproven and may produce inconclusive results.

All information generated by the use of these calculators is provided "As Is." Amkor makes no warranty or representation, whatsoever, as to the sufficiency or accuracy of any such information it has disclosed hereunder or as to the results to be obtained therefrom and assumes no responsibility arising from any use or misuse thereof.