



## Package Chemistry Substances Analysis Table

<b>Package Type:</b>	<b>VBN 048</b> (Pb-free solder balls)
<b>Dimension:</b>	<b>10 x 6 mm</b>
<b>Weight of Unit Package:</b>	<b>98 mg</b>
<b>Temperature rating:</b>	<b>260°C</b>
<b>MSL:</b>	<b>3</b>
<b>Assembly Location:</b>	<b>BKK</b>
<b>Product is RoHS Compliant</b>	

Description	Chemicals Present	CAS Number	unit weight(mg)	unit weight/package (%)	Amount (ppm)
<b>Silicon Die</b>	#1 Silicon	7440-21-3	12.4819	12.6965	126,965
	subtotal		12.4819	12.6965	126,965
<b>Bond wire</b>	#1 Gold	7440-57-5	0.4472	0.4548	4,548
	subtotal		0.4472	0.4548	4,548
<b>Die Attach</b>	#1 Epoxy resin	Trade Secret	0.1842	0.1874	1,874
	#2 Polytetrafluoroethylene	9002-84-0	0.1507	0.1533	1,533
	subtotal		0.3349	0.3407	3,407
<b>Substrate</b>	#1 Brominated Epoxy Resins	Trade Secret	1.8200	1.8513	18,513
	#2 Copper	7440-50-8	12.0960	12.3039	123,039
	#3 Gold	7440-57-5	0.1876	0.1908	1,908
	#4 Nickel	7440-02-0	0.8651	0.8799	8,799
	#5 Epoxy resin	Trade Secret	10.3347	10.5123	105,123
	#6 Silica	14808-60-7	1.5400	1.5665	15,665
	#7 SiO2 Glass Cloth	65997-17-3	6.7200	6.8355	68,355
subtotal			33.5633	34.1403	341,403
<b>Mold compound</b>	#1 Silica (fused)	60676-86-0	38.5299	39.1922	391,922
	#2 Carbon Black	1333-86-4	0.0871	0.0886	886
	#3 Epoxy resin	Trade Secret	4.7020	4.7828	47,828
	#4 Phosphoric organic catalyst	Trade Secret	0.2177	0.2214	2,214
subtotal			43.5366	44.2849	442,849
<b>Solder ball</b>	#1 Tin	7440-31-5	7.6681	7.7999	77,999
	#2 Silver	7440-22-4	0.2384	0.2425	2,425
	#3 Copper	7440-50-8	0.0397	0.0404	404
	subtotal			7.9462	8.0828
<b>TOTAL PACKAGE WEIGHT</b>			<b>98.3102</b>	<b>100.0000</b>	<b>1,000,000</b>

**Disclaimer:**

In general, four decimal values are shown. However, some variance remains from package to package. The mass values presented are thought to be accurate to within 20 percent. The report does not include materials not intentionally added to our products (impurities), or material concentrations less than 1 ppm.

**Document History Page**

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**	5260117	AAC	NEW RELEASE