



Package Chemistry Substances Analysis Table

Package Type:	RSD 056 (Pb-free solder balls)
Dimension:	6.2 x 7.7 x 1 mm
Weight of Unit Package:	76.1 mg
Temperature rating:	260°C
MSL:	3
Assembly Location:	BKK
Product is RoHS Compliant	

Description	Chemicals Present	CAS Number	unit weight(mg)	unit weight/package (%)	Amount (ppm)
Silicon Die	#1 Silicon	7440-21-3	10.4442	13.7285	137,285
	subtotal		10.4442	13.7285	137,285
Bond wire	#1 Copper	7440-50-8	0.0053	0.0070	70
	#2 Palladium (Pd)	5/3/7440	0.0000	0.0000	0
subtotal			0.0053	0.0070	70
Die Attach	#1 Epoxy resin	Trade secret	1.4520	1.9086	19,086
	#2 Polytetrafluoroethylene	9002-84-0	0.0001	0.0001	1
	#3 Silica (fused)	60676-86-0	0.6221	0.8178	8,178
subtotal			2.0742	2.7264	27,264
Substrate	#1 Copper	7440-50-8	7.6995	10.1207	101,207
	#2 Gold	7440-57-5	0.0046	0.0060	60
	#3 Nickel	7440-02-0	0.0382	0.0503	503
	#4 Cured thermosetting resin	Trade Secret	8.2321	10.8208	108,208
	#5 Continuous Filament Fiber Gla	65997-17-3	3.3599	4.4165	44,165
subtotal			19.3344	25.4142	254,142
Mold compound	#1 Silica (fused)	60676-86-0	32.6541	42.9224	429,224
	#2 Carbon Black	1333-86-4	0.0960	0.1262	1,262
	#3 Epoxy resin	Trade secret	5.3207	6.9938	69,938
	#4 Phosphoric organic catalyst	Trade secret	0.1152	0.1515	1,515
	#5 Metal Oxides	Trade secret	0.2305	0.3030	3,030
subtotal			38.4166	50.4970	504,970
Solder ball	#1 Tin	7440-31-5	5.7153	7.5125	75,125
	#2 Silver	7440-22-4	0.0580	0.0763	763
	#3 Copper	7440-50-8	0.0290	0.0381	381
subtotal			5.8023	7.6269	76,269
TOTAL PACKAGE			76.0771	100.0000	1,000,000

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

Document Title: Material Declaration Datasheet (MDDS) - FBGA056 (RSD056) - BKK - CuPd Wire
Document Number: 002-12909

Rev.	ECN No.	Orig. of Change	Description of Change
**	5265652	AAC	Initial Release.