



Material Declaration  
Device: GRF2013-W

RoHs Compliant: Yes  
Conflict Mineral Check: Yes

No.	Part Name	Material Name	Component Wt. (mg)	Material Content (Element)	CAS Number	Element Wt (%)	Element Wt (mg)	Wt % Of Total Unit Wt	PPM
1	Leadframe	Copper Alloy	1.276	Cu	7440-50-8	99.28	1.2670	0.3184	318424.57
				Cr	7440-47-3	0.27	0.0034	0.0009	865.98
				Sn	7440-31-5	0.25	0.0032	0.0008	801.83
				Zn	7440-66-6	0.20	0.0026	0.0006	641.47
2	Die Attach Material	Conductive Paste	0.023	Silver	7440-22-4	80	0.0184	0.0046	4624.28
				Resin Epoxy A	9003-36-5	10	0.0023	0.0006	578.03
				Resin Epoxy B	Trade Secret	7	0.0016	0.0004	404.62
				Phenol Resin	Trade Secret	2	0.0005	0.0001	115.61
				Dicyandiamide	461-58-5	1	0.0002	0.0001	57.80
3	Gold Wire	Gold	0.026	Au	7440-57-5	99.99	0.0264	0.0066	6634.17
				Other	Proprietary	0.01	0.0000	0.0000	0.66
4	Internal Plating	NiPdAu	0.007	Ni	7440-02-0	92.23	0.0063	0.0016	1576.18
				Pd	7440-05-3	7.47	0.0005	0.0001	127.66
				Au	7440-57-5	0.3	0.0000	0.0000	5.13
5	External Plating	NiPdAu	0.009	Ni	7440-02-0	92.23	0.0083	0.0021	2086.13
				Pd	7440-05-3	7.47	0.0007	0.0002	168.96
				Au	7440-57-5	0.3	0.0000	0.0000	6.79
6	Mold Compound	Filled Epoxy	2.503	Epoxy A	Trade Secret	3	0.0751	0.0189	18867.81
				Epoxy B	Trade Secret	3	0.0751	0.0189	18867.81
				Phenol Resin	Trade Secret	3	0.0751	0.0189	18867.81
				Silica (Amorphous) A	60676-86-0	75	1.8769	0.4717	471695.15
				Silica (Amorphous) B	7631-86-9	15	0.3754	0.0943	94339.03
				Metal Hydroxide	Trade Secret	0.5	0.0125	0.0031	3144.63
				Carbon Black	1333-86-4	0.5	0.0125	0.0031	3144.63
7	Die 1	GaAs Die	0.135	GaAs	1303-00-0	100	0.1351	0.0340	33953.25
Total Weight =			3.979						

- Note:
- (A) Element Wt. Composition is derived from MSDS / Subcon Data
  - (B) Component Wt. based on assembly of generic parts
  - (C) Internal and External Plating weight is based on nominal plating thickness
  - (D) Guerrilla RF collaborates closely with our supply chain partners to make reasonable effort of working accuracy of data but in no terms guarantees the degree of accuracy of stated data.

More Info: <https://www.guerrilla-rf.com/environmental>

Questions: [environmental@guerrilla-rf.com](mailto:environmental@guerrilla-rf.com)