

Date: 4/6/2021

Material Number: BGM13S22F512GN-V3

Pkg Config.: PK1748

Detailed Device Composition

No.	Homogeneous Material	Material Weight (mg)	Material Content	CAS Number	Material Weight (%)	Material Weight (mg)	ppm of Material	Wt % of Total Unit	ppm of Total Unit
1	Die Attach Epoxy	0.52	2-Ethyl-4-methyl-1H-imidazole-1-propiononitrile	23996-25-0	0.500	0.003	5000	0.0020	20
			Acrylate monomer	Proprietary	7.500	0.039	75000	0.0300	300
			Additive	Proprietary	7.500	0.039	75000	0.0300	300
			Bismaleimide monomer	TS ref# 10049	15.000	0.077	150000	0.0600	600
			Epoxy Resin	25068-38-6	8.000	0.041	80000	0.0320	320
			Silica (Amorphous) A	60676-86-0	46.000	0.237	460000	0.1841	1841
			Silicon Dioxide	60676-86-0	15.000	0.077	150000	0.0600	600
			Substituted Silane	Proprietary	0.500	0.003	5000	0.0020	20
2	Mold Compound	68.61	Aluminum and its compounds	Proprietary	3.000	2.058	30000	1.6000	16000
			Carbon Black	1333-86-4	0.550	0.377	5500	0.2933	2933
			Epoxy Resin (Proprietary)	Proprietary	8.000	5.489	80000	4.2666	42666
			Phenol Resin (Proprietary)	Proprietary	3.450	2.367	34500	1.8400	18400
			Silica (Amorphous) A	60676-86-0	65.000	44.599	650000	34.6659	346659
			Silica (Amorphous) B	60676-86-0	20.000	13.723	200000	10.6664	106664
3	SIP Components	22.19	Detail Not Available	0000000	100.000	22.190	1000000	17.2478	172478
4	Substrate	27.88	3-methoxy-3-methylbutylacetate	103429-90-9	0.930	0.259	9300	0.2016	2016
			Barium Sulfate	7727-43-7	0.020	0.006	200	0.0043	43
			C.I pigment blue 15	147-14-8	0.060	0.017	600	0.0130	130
			Copper	7440-50-8	49.370	13.767	493700	10.7007	107007
			Dipropylene glycol monomethyl ether	34590-94-8	0.510	0.142	5100	0.1105	1105
			Glass Fabric	65997-17-3	14.230	3.968	142300	3.0843	30843
			Gold	7440-57-5	0.280	0.078	2800	0.0607	607
			Heavy Aromatic Solvent naphtha	64742-94-5	1.710	0.477	17100	0.3706	3706
			Modified Epoxy	186511-	5.670	1.581	56700	1.2289	12289

			Acrylate Resin	06-8					
			Nickel	7440-02-0	1.740	0.485	17400	0.3771	3771
			Organic yellow pigment	Proprietary	0.060	0.017	600	0.0130	130
			Palladium	7440-05-3	0.320	0.089	3200	0.0694	694
			Proprietary Resin Mixture	Proprietary	19.720	5.499	197200	4.2742	42742
			Silicon Dioxide	60676-86-0	2.940	0.820	29400	0.6372	6372
			Talc (No Asbestiform Fibers)	14807-96-9	2.440	0.680	24400	0.5289	5289
5	Bond Wire	0.22	Calcium	7440-70-2	0.002	0.000	20	0.0000	0
			Gold	7440-57-5	99.048	0.222	990480	0.1725	1725
			Palladium	7440-05-3	0.950	0.002	9500	0.0017	17
6	Solder Paste	6.22	Copper	7440-50-8	3.000	0.187	30000	0.1451	1451
			diethylene glycol monobutyl ether	112-34-5	2.000	0.124	20000	0.0968	968
			Proprietary Material	Proprietary	20.000	1.245	200000	0.9676	9676
			Silver	7440-22-4	5.000	0.311	50000	0.2419	2419
			Tin	7440-31-5	70.000	4.357	700000	3.3864	33864
7	Shielding Material	0.30	Copper	7440-50-8	100.000	0.305	1000000	0.2371	2371
8	Shielding Material	0.27	Carbon	7440-44-0	0.015	0.000	150	0.0000	0
			Chromium	7440-47-3	17.000	0.045	170000	0.0353	353
			Iron	7439-89-6	65.453	0.175	654530	0.1358	1358
			Manganese	7439--96-5	1.000	0.003	10000	0.0021	21
			Molybdenum	7439-98-7	2.500	0.007	25000	0.0052	52
			Nickel	7440-02-0	13.500	0.036	135000	0.0280	280
			Phosphorous	7723-14-0	0.017	0.000	170	0.0000	0
			Silicon	7440-21-3	0.500	0.001	5000	0.0010	10
			Sulfur	68515-96-8	0.015	0.000	150	0.0000	0
9	Die	2.43	Silicon	7440-21-3	99.800	2.425	998000	1.8850	18850
			Silicon Dioxide	60676-86-0	0.200	0.005	2000	0.0038	38
	Total Unit Weight =	128.64				128.64		100.0000	1000000