




<div>MICROCHIP</div>						Package Homogeneous Materials				
Semiconductor Device Type:		QVC	PBGA-484-23x23x2.4mm-SnPB							
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	99.58	(mg) Total	Die	% of Total Weight	4.59
Silicon	7440-21-3	Die	4.59	99.58	45919		Silicon	7440-21-3	100.00	
Organic Resin	7439-89-6	Substrate	4.79	103.78	47852		Total 100.00			
Inorganic Filler	7723-14-0	Substrate	4.79	103.78	47852					
Glass Fabric	7440-66-6	Substrate	7.83	169.81	78303	729.16	(mg) Total	Substrate	% of Total Weight	33.62
Organic Resin	7440-50-8	Substrate	2.68	58.19	26832		Organic Resin	7439-89-6	14.23	
Inorganic Filler	7440-22-4	Substrate	2.68	58.19	26832		Inorganic Filler	7723-14-0	14.23	
Glass Fabric	7439-89-6	Substrate	4.39	95.22	43907		Glass Fabric	7440-66-6	23.29	
Copper	7723-14-0	Substrate	4.16	90.22	41603		Organic Resin	7440-50-8	7.98	
Cured Resin	Trade Secret	Substrate	1.45	31.41	14482		Inorganic Filler	7440-22-4	7.98	
Phthalocyanine Blue	147-14-8	Substrate	0.00	0.08	38		Glass Fabric	7439-89-6	13.06	
Organic Pigment	Trade Secret	Substrate	0.00	0.08	38		Copper	7723-14-0	12.37	
Silica	Trade Secret	Substrate	0.01	0.21	96		Cured Resin	Trade Secret	4.31	
Barium sulfate	7727-43-7	Substrate	0.40	8.65	3990		Phthalocyanine Blue	147-14-8	0.01	
Talc	14807-96-6	Substrate	0.04	0.87	403		Organic Pigment	Trade Secret	0.01	
Antifoamer and Leveling Agent	Trade Secret	Substrate	0.01	0.29	134		Silica	Trade Secret	0.03	
Nickel	7440-50-8	Substrate	0.35	7.54	3479		Barium sulfate	7727-43-7	1.19	
Gold	7440-22-4	Substrate	0.04	0.83	382		Talc	14807-96-6	0.12	
Silver	7440-22-4	Die Attach	0.39	8.46	3903		Antifoamer and Leveling Agent	Trade Secret	0.04	
Tetramethylene dimethacrylate	2082-81-7	Die Attach	0.04	0.95	439		Nickel	7440-50-8	1.03	
Difunctional Acrylic Esters	Trade Secret	Die Attach	0.00	0.10	44		Gold	7440-22-4	0.11	
Gold	7440-57-5	Bonding Wire	0.71	15.43	7115		Total 100.00			
Palladium	7440-05-3	Bonding Wire	0.01	0.16	72					
Tin	7440-31-5	Solder Ball	16.58	359.57	165804	9.51	(mg) Total	Die Attach	% of Total Weight	0.44
Lead	7439-92-1	Solder Ball	9.74	211.18	97377		Silver	7440-22-4	89.00	
Epoxy Resin A	Trade Secret	Molding Compound	0.69	14.88	6862		Tetramethylene dimethacrylate	2082-81-7	10.00	
Epoxy Resin B	Trade Secret	Molding Compound	0.69	14.88	6862		Difunctional Acrylic Esters	Trade Secret	1.00	
Phenol Resin A	Trade Secret	Molding Compound	0.69	14.88	6862		Total 100.00			
Phenol Resin B	Trade Secret	Molding Compound	0.69	14.88	6862					
Silica(Amorphous) A	60676-86-0	Molding Compound	25.73	558.06	257329	15.59	(mg) Total	Bonding Wire	% of Total Weight	0.72
Silica(Amorphous) B	7631-86-9	Molding Compound	4.98	107.89	49750		Gold	7440-57-5	99.00	
Metal Hydroxide	Trade Secret	Molding Compound	0.69	14.88	6862		Palladium	7440-05-3	1.00	
Carbon Black	1333-86-4	Molding Compound	0.17	3.72	1716		Total 100.00			
TOTALS:			100.00	2168.67	1,000,000					
2168.67 mg Total Mass						570.75	(mg) Total	Solder Ball	% of Total Weight	26.32
							Tin	7440-31-5	63.00	
							Lead	7439-92-1	37.00	
							Total 100.00			
						744.08	(mg) Total	Molding Compound	% of Total Weight	34.31
							Epoxy Resin A	Trade Secret	2.00	
							Epoxy Resin B	Trade Secret	2.00	
							Phenol Resin A	Trade Secret	2.00	
							Phenol Resin B	Trade Secret	2.00	
							Silica(Amorphous) A	60676-86-0	75.00	
							Silica(Amorphous) B	7631-86-9	14.50	
							Metal Hydroxide	Trade Secret	2.00	
							Carbon Black	1333-86-4	0.50	
						2168.67	Total	100.00		100.00

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