



Semiconductor Device Type: H4A 004 VDFN 3.2x2.5x0.9mm NiPdAu				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			J-STD-609A Product Marking and/or Pkg. Labeling e3					
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	9.08	(mg) Total	Mold Compound	% of Total Weight	46.57					
Silica, vitreous (or fused)	60676-86-0	Mold Compound	39.585	7.719	395,845	9.08	(mg) Total	Mold Compound	% of Total Weight	46.57					
Epoxy Resin	Trade Secret	Mold Compound	3.958	0.772	39,585										
Phenolic Resin	Trade Secret	Mold Compound	1.630	0.318	16,300										
Silica, vitreous (or fused)	7631-86-9	Mold Compound	1.257	0.245	12,574										
Carbon Black	1333-86-4	Mold Compound	0.140	0.027	1,397										
Copper	7440-50-8	Lead Frame	45.132	8.801	451,324										
Silver	7440-22-4	Lead Frame	0.883	0.172	8,826	9.03	(mg) Total	Lead Frame	% of Total Weight	46.33					
Tin	7440-31-5	Lead Frame	0.116	0.023	1,158										
Chromium	7440-47-3	Lead Frame	0.116	0.023	1,158										
Zinc	7440-66-6	Lead Frame	0.083	0.016	834										
Silica Fused	60676-86-0	Die Attach1	0.388	0.076	3,879										
Epoxy Resin	120206-26-0	Die Attach1	0.115	0.022	1,148										
Poly(Bisphenol A-co-epichlorohydrin)	25068-38-6	Die Attach1	0.087	0.017	874	0.12	(mg) Total	Die Attach1	% of Total Weight	0.59					
Silver	7440-22-4	Die Attach2	0.367	0.071	3,666										
Acrylic Resin	Trade secret	Die Attach2	0.103	0.020	1,034										
Doped Silicon	7440-21-3	Chip (Die)1	2.590	0.505	25,900										
Doped Silicon	7440-21-3	Chip (Die)2	1.580	0.308	15,800										
Doped Gold	7440-57-5	Wire Bond1	0.360	0.070	3,600										
Doped Gold	7440-57-5	Wire Bond2	0.150	0.029	1,500	0.09	(mg) Total	Die Attach2	% of Total Weight	0.47					
Nickel	7440-02-0	Plating on external leads (pins)	1.224	0.239	12,240										
Palladium	7440-05-3	Plating on external leads (pins)	0.068	0.013	680										
Gold	7440-57-5	Plating on external leads (pins)	0.068	0.013	680										
TOTALS:			100.000	19.500	1,000,000						0.51	Total (mg)	Chip (Die)1	% of Total Weight	2.59
0.0195 g Total Mass															
This semiconductor device and its homogenous materials comply with EU Directives: 2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 June 2011) and 2015/863/EU (31 March 2015) and 2002/53/EC (End-of-Life Vehicles (ELV) without exemption (zero)															
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.															
If a chemical substance is absent from the list above, the chemical substance is NOT an intentional ingredient in the semiconductor device and, to the best of Microchip Technology Incorporated's knowledge and belief as of the date of this document, there is no credible reason to believe that the unavoidable impurity concentration of the chemical substance, if any, is not below the threshold of regulatory concern for any regulatory scheme world-wide.															
Molding compounds used by Microchip meet the UL94 V0 flammability standard for plastics. You can access the UL IQTM family of databases to obtain a test report at http://ul.com/global/eng/pages/offering/industries/chemicals/plastics/															
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Assembled package referenced above is EU REACH compliant based on the latest SVHC candidate list of ECHA which can be found at http://echa.europa.eu/web/guest/candidate-list-table															
						0.31	Total (mg)	Chip (Die)2	% of Total Weight	1.58					
						0.07	(mg) Total	Wire Bond1	% of Total Weight	0.36					
						0.03	(mg) Total	Wire Bond2	% of Total Weight	0.15					
						0.27	(mg) Total	Plating on external leads (pins)	% of Total Weight	1.36					
						19.500	Total	100.00		100.00					