



Semiconductor Device Type: P9A 20 VQFN 5.0x3.2x0.9mm NiPdAu			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			J-STD-609A Product Marking and/or Pkg. Labeling e4
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	(mg) Total	Mold Compound	% of Total Weight	
Silica, fused	60676-86-0	Mold Compound	46.746	18.932	467,460	21.04	Silica, fused 60676-86-0 Epoxy Resin Trade Secret Phenolic Resin Trade Secret Carbon Black 1333-86-4	90.00 4.85 4.85 0.30	51.94
Epoxy Resin	Trade Secret	Mold Compound	2.519	1.020	25,191				
Phenolic Resin	Trade Secret	Mold Compound	2.519	1.020	25,191				
Carbon Black	1333-86-4	Mold Compound	0.156	0.063	1,558				
Copper	7440-50-8	Lead Frame	39.643	16.055	396,426				
Iron	7439-89-6	Lead Frame	0.060	0.024	596	16.09	Lead Frame	% of Total Weight	39.73
Phosphorous	7723-14-0	Lead Frame	0.016	0.006	159				
Zinc (Metal)	7440-66-6	Lead Frame	0.012	0.005	119				
Silver	7440-22-4	Die Attach	0.932	0.377	9,317				
Acrylic Resin	Trade secret	Die Attach	0.169	0.069	1,694				
Epoxy Resin	Trade secret	Die Attach	0.109	0.044	1,089	0.49	Die Attach	% of Total Weight	1.21
Silicon	7440-21-3	Chip (Die)	5.210	2.110	52,100				
Gold	7440-57-5	Wire Bond	0.650	0.263	6,500				
Nickel	7440-02-0	Plating on external leads (pins)	1.187	0.481	11,872				
Palladium	7440-05-3	Plating on external leads (pins)	0.045	0.018	455				
Gold	7440-57-5	Plating on external leads (pins)	0.027	0.011	273	2.11	Chip (Die)	% of Total Weight	5.21
<b>TOTALS:</b>			<b>100.000</b>	<b>40.500</b>	<b>1,000,000</b>				
<b>0.0405 g Total Mass</b>									
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 <a href="http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/">http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/</a>									
The protective "tubes" in which the specific product is shipped are made from polyvinyl chloride (PVC) plastic. "Window envelopes" used to hold the packing slip on the outer box and certain "reels" may be made from PVC plastic.									
Microchip Technology Incorporated believes the information in this form concerning substances restricted by RoHS in Microchip Technology Incorporated's semiconductor devices in their original packing materials is true and correct to the best of its knowledge and belief, as of the date listed in this form. Microchip Technology Incorporated cannot guarantee the completeness and accuracy of data in this form because it has been compiled based on the ranges provided in Material Safety Data Sheets provided by raw material suppliers. Supplier information is often protected from disclosure as trade secrets and some information may not have been provided by subcontract assemblers and raw material suppliers. Information is provided only as estimates of the average weight of these parts and the average weight of anticipated significant toxic metals components. These estimates do not include trace levels of dopants, metals, and non-metal materials contained within silicon devices (silicon IC) in the finished parts.									
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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 <a href="http://echa.europa.eu/web/guest/candidate-list-table">http://echa.europa.eu/web/guest/candidate-list-table</a>									
						40.50			100.00