



Semiconductor Device Type: Q2AE (S9X) 008 TDFN-S 6x8x0.8mm Matte Tin				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Marking and/or Pkg. Labeling e3
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	52.55	(mg) Total	Mold Compound	% of Total Weight	37.14
Fused Silica	60676-86-0	Mold Compound	32.869	46.509	328,689		Fused Silica	60676-86-0	88.50	
Epoxy Resin 1	Trade Secret	Mold Compound	2.414	3.416	24,141		Epoxy Resin	Trade Secret	6.50	
Phenol Resin	Trade Secret	Mold Compound	1.764	2.496	17,642		Phenol Resin	Trade Secret	4.75	
Carbon Black	1333-86-4	Mold Compound	0.093	0.131	929		Carbon Black	1333-86-4	0.25	
Copper	7440-50-8	Lead Frame	47.490	67.199	474,904		Total 100.00			
Silver	7440-22-4	Lead Frame	3.287	4.651	32,867	73.82	(mg) Total	Lead Frame	% of Total Weight	52.17
Iron	7439-89-6	Lead Frame	1.143	1.617	11,425		Copper	7440-50-8	91.03	
Zinc	7440-66-6	Lead Frame	0.177	0.251	1,774		Silver	7440-22-4	6.30	
Phosphorus	7723-14-0	Lead Frame	0.073	0.103	730		Iron	7439-89-6	2.19	
Silver	7440-22-4	Die Attach	0.963	1.362	9,625		Zinc	7440-66-6	0.34	
Acrylic Resin	Trade secret	Die Attach	0.106	0.150	1,063		Phosphorus	7723-14-0	0.14	
Polybutadiene derivative & copolymer	Trade secret	Die Attach	0.081	0.115	813		Total 100.00			
Acrylate	Trade secret	Die Attach	0.069	0.097	688	1.77	(mg) Total	Die Attach	% of Total Weight	1.25
Epoxy Resin 2	Trade secret	Die Attach	0.031	0.044	313		Silver	7440-22-4	77.00	
Silicon	7440-21-3	Chip (Die)	7.800	11.037	78,000		Acrylic Resin	Trade secret	8.50	
Gold	7440-57-5	Wire Bond	0.040	0.057	400		Polybutadiene derivative & copolymer	Trade secret	6.50	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.600	2.264	16,000		Acrylate	Trade secret	5.50	
0.1415 g Total Mass			TOTALS:	100.000	141.500	1,000,000	Epoxy Resin	Trade secret	2.50	
							Total 100.00			
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)						11.04	Total (mg)	Chip (Die)	% of Total Weight	7.8
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.							Doped Silicon	7440-21-3	100.00	
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.							Total 100.00			
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/offerings/industries/chemicals/plastics/						0.06	(mg) Total	Wire Bond	% of Total Weight	0.04
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.							Doped Gold	7440-57-5	100.00	
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.							Total 100.00			
Microchip Technology Incorporated does not provide any warranty, express or implied, with respect to the information provided in this declaration. The exclusive, limited product warranties provided by Microchip Technology Incorporated and its subsidiaries are contained in Microchip's standard terms and conditions of sale. These are provided in Microchip's quotations, sales order acknowledgement, and invoices.						2.26	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.6
Microchip disclaims any duty to notify users of updates or changes to Material Content Declarations and shall not be liable for any damages, direct or indirect, consequential or otherwise, suffered by users or third parties as a result of the users' reliance on the information in Material Content Declarations (MCD) or independent third party test reports (SGS) or of this Certificate of Compliance for semiconductor products.							Tin	7440-31-5	100.00	
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							Total 100.00			
						141.500				100.000