MICROCHIP

Semiconductor Device Type:	J5X	128 LQFP 14x14x1.4mm Matte Tin	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 e3
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	530.78	(mg) Total	Mold Compound	% ot Total Weight	71.63
Fused Silica	60676-86-0	Mold Compound	60.599	449.038	605,990		Fused Silica	60676-86-0	84.60	
Epoxy Resin	Trade Secret	Mold Compound	4.226	31.316	42,262		Epoxy Resin	Trade Secret	5.90	
Metal Hydroxide	Trade Secret	Mold Compound	4.083	30.254	40,829		Metal Hydroxide	Trade Secret	5.70	
Phenol Resin	Trade Secret	Mold Compound	2.579	19.108	25,787		Phenol Resin	Trade Secret	3.60	
Carbon Black	1333-86-4	Mold Compound	0.143	1.062	1,433		Carbon Black	1333-86-4	0.20	
Copper	7440-50-8	Lead Frame	23.553	174.528	235,531			Total	100.00	
Nickel	7440-02-0	Lead Frame	0.628	4.655	6,281	183.25	(mg) Total	Lead Frame	% of Total Weight	24.73
Silver	7440-22-4	Lead Frame	0.413	3.058	4,127		Copper	7440-50-8	95.24	
Silicon	7440-21-3	Lead Frame	0.111	0.825	1,113		Nickel	7440-02-0	2.54	
Magnesium	7439-95-4	Lead Frame	0.025	0.183	247		Silver	7440-22-4	1.67	
Silver	7440-22-4	Die Attach	0.304	2.253	3,040		Silicon	7440-21-3	0.45	
Epoxy resin	Trade Secret	Die Attach	0.080	0.593	800		Magnesium	7439-95-4	0.10	
Copper	7440-50-8	Die Attach	0.016	0.119	160			Total	100.00	
Silicon	7440-21-3	Chip (Die)	1.640	12.152	16,400	2.96	(mg) Total	Die Attach	% of Total Weight	0.40
Gold	7440-57-5	Wire Bond	0.450	3.335	4,500		Silver	7440-22-4	76.00	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.150	8.522	11,500		Epoxy resin	Trade Secret	20.00	
		TOTALS:	100.000	741.000	1,000,000		Copper	7440-50-8	4.00	
	0.7410 g Total Mass							Total	100.00	
						12.15	Total (mg)	Chip (Die)	% of Total Weight	1.64
							Doped Silicon	7440-21-3	100.00	
								Total	100.00	
						3.33	(mg) Total	Wire Bond	% of Total Weight	0.45
							Gold	7440-57-5	100.00	
								Total	100.00	
						8.52	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.15
							Tin	7440-31-5	100.00	
								Total	100.00	
						741.00				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)

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/offerings/industries/chemicals/plastics/

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 http://echa.europa.eu/web/guest/candidate-list-table