MICROCHIP

Semiconductor Device Type: WHE / TP (W6X) 032 TSOP 8x14mm Matte Tin

Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
Silica, vitreous (or fused)	60676-86-0	Mold Compound	67.830	169.372	678,300
Epoxy Resin	Trade Secret	Mold Compound	6.943	17.336	69,426
Phenolic Resin	Trade Secret	Mold Compound	4.788	11.956	47,880
Carbon Black	1333-86-4	Mold Compound	0.239	0.598	2,394
Copper	7440-50-8	Lead Frame	10.000	24.971	100,003
Nickel	7440-02-0	Lead Frame	0.267	0.666	2,667
Silicon	7440-21-3	Lead Frame	0.047	0.118	473
Magnesium	7439-95-4	Lead Frame	0.011	0.026	105
Silver	7440-22-4	Lead Frame	0.175	0.438	1,752
Silver	7440-22-4	Die Attach	0.600	1.498	6,000
Epoxy Resin	Trade Secret	Die Attach	0.128	0.318	1,275
Copper	7440-50-8	Die Attach	0.023	0.056	225
Silicon	7440-21-3	Chip (Die)	7.500	18.728	75,000
Doped Gold	7440-57-5	Wire Bond	0.200	0.499	2,000
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.250	3.121	12,500
		TOTALS:	**100.000**	**249.700**	**1,000,000**

0.2497 g Total Mass

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

199.26	**(mg) Total**	**Mold Compound**	**% ot Total Weight**	**79.8**
	Silica, vitreous (or fused)	60676-86-0	85.00	
	Epoxy Resin	Trade Secret	8.70	
	Phenolic Resin	Trade Secret	6.00	
	Carbon Black	1333-86-4	0.30	
		Total	**100.00**	
26.22	**(mg) Total**	**Lead Frame**	**% of Total Weight**	**10.5**
	Copper	7440-50-8	95.24	
	Nickel	7440-02-0	2.54	
	Silicon	7440-21-3	0.45	
	Magnesium	7439-95-4	0.10	
	Silver	7440-22-4	1.67	
		Total	**100.00**	
1.87	**(mg) Total**	**Die Attach**	**% of Total Weight**	**0.75**
	Silver	7440-22-4	80.00	
	Epoxy Resin	Trade Secret	17.00	
	Copper	7440-50-8	3.00	
		Total	**100.00**	
18.73	**(mg) Total**	**Chip (Die)**	**% of Total Weight**	**7.5**
	Silicon	7440-21-3	100.00	
		Total	**100.00**	
0.50	**(mg) Total**	**Wire Bond**	**% of Total Weight**	**0.2**
	Doped Gold	7440-57-5	100.00	
		Total	**100.00**	
3.12	**(mg) Total**	**Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour**	**% of Total Weight**	**1.25**
	Tin	7440-31-5	100.00	
		Total	**100.00**	
249.700				**100.000**

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