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Package Description	64-Pad, 9 x 9 x 1.0 mm Body, Lead Pitch 0.50 mm, 5.40 mm Exposed Pad, Plastic Very Thin Quad Flat No Lead Package (VQFN)						
Lead Finish	Matte Tin (Sn)			Package Code / GPC		TEB / ZNS	
J-STD-609 Category	e3			Termination Base Alloy:		Copper	
Package Material Declaration							
Material	Substance	CAS #	Weight (mg)	Homogeneous Material		Package	
				Percentage	ppm	Percentage	ppm
Leadframe	Copper (Cu)	7440-50-8	61.790	97.4	974000	31.25	312463
	Iron (Fe)	7439-89-6	1.523	2.4	24000	0.77	7699
	Phosphorous (P)	7723-14-0	0.063	0.1	1000	0.03	321
	Zinc (Zn)	7440-66-6	0.063	0.1	1000	0.03	321
Sub-Total			63.439	100.0	1000000	32.08	320804
Integrated Circuit	Silicon (Si)	7440-21-3	9.825	100.0	1000000	4.97	49686
Sub-Total			9.825	100.0	1000000	4.97	49686
Die Attach	Silver (Ag)	7440-22-4	0.499	76.6	766000	0.25	2524
	Acrylic Resin	Proprietary	0.054	8.3	83000	0.03	274
	Acrylate	Proprietary	0.035	5.3	53000	0.02	175
	Polybutadiene Copolymer	Proprietary	0.034	5.2	52000	0.02	171
	Epoxy Resin	Proprietary	0.016	2.4	24000	0.01	79
	Additive	Proprietary	0.006	0.9	9000	0.00	30
	Butadiene Copolymer	Proprietary	0.006	0.9	9000	0.00	30
	Peroxide	Proprietary	0.003	0.4	4000	0.00	13
Sub-Total			0.652	100.0	1000000	0.33	3296
Die Pad Plating	Silver (Ag)	7440-22-4	1.423	100.0	1000000	0.72	7194
Sub-Total			1.423	100.0	1000000	0.72	7194
Bond Wire	Copper (Cu)	7440-50-8	0.247	97.6	976000	0.12	1249
	Palladium (Pd)	7440-05-3	0.006	2.4	24000	0.00	31
Sub-Total			0.253	100.0	1000000	0.13	1279
Encapsulation	Silica (Amorphous) A	60676-86-0	92.493	77.6	776000	46.77	467725
	Epoxy Resin	Proprietary	10.489	8.8	88000	5.30	53041
	Silica (Amorphous) B	7631-86-9	10.489	8.8	88000	5.30	53041
	Phenol Resin	Proprietary	4.768	4.0	40000	2.41	24110
	Carbon Black	1333-86-4	0.954	0.8	8000	0.48	4822
Sub-Total			119.192	100.0	1000000	60.27	602738
Terminal Plating	Tin (Sn)	7440-31-5	2.967	100.0	1000000	1.50	15004
Sub-Total			2.967	100.0	1000000	1.50	15004
Total			197.750			100.00	1000000

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/>.

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>.