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Package Description	20-Lead, 4 x 4 x 0.8 mm Body, Lead Pitch 0.50 mm, 2.6 mm Exposed Pad, Quad Flat No Lead Package (WQFN)						
Lead Finish	Matte Tin (Sn)			Package Code / GPC		TRB / ZYZ	
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	14.943	97.4	974000	40.26	402640
	Iron (Fe)	7439-89-6	0.368	2.4	24000	0.99	9921
	Phosphorous (P)	7723-14-0	0.015	0.1	1000	0.04	413
	Zinc (Zn)	7440-66-6	0.015	0.1	1000	0.04	413
Sub-Total			15.342	100.0	1000000	41.34	413388
Integrated Circuit	Silicon (Si)	7440-21-3	2.835	100.0	1000000	7.64	76397
Sub-Total			2.835	100.0	1000000	7.64	76397
Die Attach	Silver (Ag)	7440-22-4	0.144	76.6	766000	0.39	3882
	Acrylic Resin	Proprietary	0.016	8.3	83000	0.04	421
	Acrylate	Proprietary	0.010	5.3	53000	0.03	269
	Polybutadiene Copolymer	Proprietary	0.010	5.2	52000	0.03	263
	Epoxy Resin	Proprietary	0.005	2.4	24000	0.01	122
	Additive	Proprietary	0.002	0.9	9000	0.00	46
	Butadiene Copolymer	Proprietary	0.002	0.9	9000	0.00	46
	Peroxide	Proprietary	0.001	0.4	4000	0.00	20
Sub-Total			0.188	100.0	1000000	0.51	5067
Die Pad Plating	Silver (Ag)	7440-22-4	0.344	100.0	1000000	0.93	9270
Sub-Total			0.344	100.0	1000000	0.93	9270
Bond Wire	Copper (Cu)	7440-50-8	0.071	97.6	976000	0.19	1903
	Palladium (Pd)	7440-05-3	0.002	2.4	24000	0.00	47
Sub-Total			0.072	100.0	1000000	0.20	1950
Encapsulation	Silica (Amorphous) A	60676-86-0	12.189	69.2	692000	32.84	328419
	Silica (Amorphous) B	7631-86-9	2.484	14.1	141000	6.69	66918
	Epoxy Resin	Proprietary	1.603	9.1	91000	4.32	43188
	Phenol Resin	Proprietary	1.251	7.1	71000	3.37	33696
	Carbon Black	1333-86-4	0.088	0.5	5000	0.24	2373
Sub-Total			17.614	100.0	1000000	47.46	474593
Terminal Plating	Tin (Sn)	7440-31-5	0.718	100.0	1000000	1.93	19334
Sub-Total			0.718	100.0	1000000	1.93	19334
Total			37.114			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>.