



Semiconductor Device Type: P7X 028 QFN 5x5x0.9mm Matte Tin			Termination Base Alloy: Copper Alloy (Cu)		
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
Silica, vitreous (or fused)	60676-86-0	Mold Compound	36.338	24.164	363,375
Epoxy Resin	Trade Secret	Mold Compound	3.634	2.416	36.338
Phenolic Resin	Trade Secret	Mold Compound	1.496	0.995	14.963
Silica, vitreous (or fused)	7631-86-9	Mold Compound	1.154	0.768	11.543
Carbon Black	1333-86-4	Mold Compound	0.128	0.085	1,283
Copper	7440-50-8	Lead Frame	42.249	28.096	422,489
Tin	7440-31-5	Lead Frame	0.108	0.072	1,084
Silver	7440-22-4	Lead Frame	0.826	0.549	8,262
Zinc	7440-66-6	Lead Frame	0.078	0.052	781
Chromium	7440-47-3	Lead Frame	0.108	0.072	1,084
Silver	7440-22-4	Die Attach 1	0.640	0.425	6,396
Acrylic Resin	Trade secret	Die Attach 1	0.180	0.120	1,804
SiO2 Filler	Trade Secret	Die Attach 2	0.265	0.176	2,653
Epoxy Resin	Trade Secret	Die Attach 2	0.134	0.089	1,340
Acrylic Copolymer	Trade Secret	Die Attach 2	0.080	0.053	804
Phenol Resin	Trade Secret	Die Attach 2	0.080	0.053	804
Doped Silicon	7440-21-3	Chip (Die)	8.950	5.952	89,500
Doped Gold	7440-57-5	Wire Bond	1.380	0.918	13,800
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	2.170	1.443	21,700
<b>0.0665 g Total Mass</b>			<b>TOTALS:</b>	<b>100.000</b>	<b>66.500</b>

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/offers/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.

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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>

Package Homogeneous Materials			J-STD-609A Product Marking and/or Pkg. Labeling e3	
28.43	(mg) Total	Mold Compound	% of Total Weight	42.75
	Silica, vitreous (or fused)	60676-86-0	85.00	
	Epoxy Resin	Trade Secret	8.50	
	Phenolic Resin	Trade Secret	3.50	
	Silica, vitreous (or fused)	7631-86-9	2.70	
	Carbon Black	1333-86-4	0.30	
	<b>Total</b>		<b>100.00</b>	
28.84	(mg) Total	Lead Frame	% of Total Weight	43.37
	Copper	7440-50-8	97.42	
	Tin	7440-31-5	0.25	
	Silver	7440-22-4	1.91	
	Zinc	7440-66-6	0.18	
	Chromium	7440-47-3	0.25	
	<b>Total</b>		<b>100.00</b>	
0.55	(mg) Total	Die Attach 1	% of Total Weight	0.82
	Silver	7440-22-4	78.00	
	Acrylic Resin	Trade secret	22.00	
	<b>Total</b>		<b>100.00</b>	
0.37	(mg) Total	Die Attach 2	% of Total Weight	0.56
	SiO2 Filler	Trade Secret	47.38	
	Epoxy Resin	Trade Secret	23.92	
	Acrylic Copolymer	Trade Secret	14.35	
	Phenol Resin	Trade Secret	14.35	
	<b>Total</b>		<b>100.00</b>	
5.95	Total (mg)	Chip (Die)	% of Total Weight	8.95
	Doped Silicon	7440-21-3	100	
	<b>Total</b>		<b>100.00</b>	
0.92	(mg) Total	Wire Bond	% of Total Weight	1.38
	Doped Gold	7440-57-5	100.00	
	<b>Total</b>		<b>100.00</b>	
1.44	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	2.17
	Tin	7440-31-5	100.00	
	<b>Total</b>		<b>100.00</b>	
<b>66.500</b>			<b>100.00</b>	