



 MICROCHIP			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		
Semiconductor Device Type: MV (R6X) 028 UQFN 4x4x0.5mm Matte Tin											
Basic Substance		CAS Number	Contained in Sub-Component	% Total Weight	mg/part	ppm	11.99	(mg) Total	Mold Compound	% of Total Weight	45.93
Silica, fused		60676-86-0	Mold Compound	41.337	10.789	413,370	Epoxy Resin (NLP # 500-033-5)	Silica, fused	60676-86-0	90.00	
Epoxy Resin (NLP # 500-033-5)		Trade Secret	Mold Compound	2.228	0.581	22,276		Trade Secret	4.85		
Phenolic Resin		Trade Secret	Mold Compound	2.228	0.581	22,276		Phenolic Resin	Trade Secret	4.85	
Carbon Black		1333-86-4	Mold Compound	0.138	0.036	1,378		Carbon Black	1333-86-4	0.30	
Copper		7440-50-8	Lead Frame	34.095	8.899	340,953		Total		100.00	
Tin		7440-31-5	Lead Frame	0.088	0.023	875	9.14	(mg) Total	Lead Frame	% of Total Weight	35
Silver		7440-22-4	Lead Frame	0.667	0.174	6,668		Copper	7440-50-8	97.42	
Zinc		7440-66-6	Lead Frame	0.063	0.016	630		Tin	7440-31-5	0.25	
Chromium		7440-47-3	Lead Frame	0.088	0.023	875		Silver	7440-22-4	1.91	
Silver		7440-22-4	Die Attach	1.123	0.293	11,232		Zinc	7440-66-6	0.18	
Acrylate resins Proprietary		Trade Secret	Die Attach	0.259	0.068	2,592		Chromium	7440-47-3	0.25	
Treated silica		Trade Secret	Die Attach	0.029	0.008	288	Total		100.00		
Heterocyclic organic compound		Trade Secret	Die Attach	0.029	0.008	288	0.38	(mg) Total	Die Attach	% of Total Weight	1.44
Silicon		7440-21-3	Chip (Die)	8.700	2.271	87,000	Heterocyclic organic compound	Silver	7440-22-4	78.00	
Gold		7440-57-5	Wire Bond	0.510	0.133	5,100		Acrylate resins Proprietary	Trade Secret	18.00	
Tin		7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	8.420	2.198	84,200		Treated silica	Trade Secret	2.00	
								Trade Secret	2.00		
TOTALS:						100.000	26.100	1,000,000	Total		100.00
0.0261 g Total Mass											
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.											
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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											

2.27	Total (mg)	Chip (Die)	% of Total Weight	8.7
	Doped Silicon	7440-21-3	100.00	
		Total	100.00	
0.13	(mg) Total	Wire Bond	% of Total Weight	0.51
	Doped Gold	7440-57-5	100.00	
		Total	100.00	
2.20	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	8.42
	Tin	7440-31-5	100.00	
		Total	100.00	
26.1				

100.00

100.00