




<div><b>MICROCHIP</b></div>						Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Pkging and/or Pkg. Labeling e3	
Semiconductor Device Type: ML / MM (M4X) 028 QFN 6x6mm Matte Tin													
Basic Substance		CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	52.76 (mg) Total		Mold Compound	% of Total Weight	51.93		
Silica, fused		60676-86-0	Mold Compound	46.737	47.485	467,370	Epoxy Resin (NLP # 500-033-5)		Silica, fused	60676-86-0	90.00		
Epoxy Resin (NLP # 500-033-5)		Trade Secret	Mold Compound	2.519	2.559	25,186			Trade Secret	4.85			
Phenolic Resin		Trade Secret	Mold Compound	2.519	2.559	25,186			Phenolic Resin	Trade Secret	4.85		
Carbon Black		1333-86-4	Mold Compound	0.156	0.158	1,558			Carbon Black	1333-86-4	0.30		
Copper		7440-50-8	Lead Frame	37.885	38.491	378,847	Total		100.00				
Tin		7440-31-5	Lead Frame	0.097	0.099	972	39.51 (mg) Total		Lead Frame	% of Total Weight	38.89		
Silver		7440-22-4	Lead Frame	0.741	0.753	7,409			Copper	7440-50-8	97.42		
Zinc		7440-66-6	Lead Frame	0.070	0.071	700			Tin	7440-31-5	0.25		
Chromium		7440-47-3	Lead Frame	0.097	0.099	972			Silver	7440-22-4	1.91		
Silver		7440-22-4	Die Attach	0.413	0.420	4,134			Zinc	7440-66-6	0.18		
Acrylate resins Proprietary		Trade Secret	Die Attach	0.095	0.097	954			Chromium	7440-47-3	0.25		
Treated silica		Trade Secret	Die Attach	0.011	0.011	106	Total		100.00				
Heterocyclic organic compound		Trade Secret	Die Attach	0.011	0.011	106	0.54 (mg) Total		Die Attach	% of Total Weight	0.53		
Silicon		7440-21-3	Chip (Die)	3.290	3.343	32,900	Acrylate resins Proprietary		Silver	7440-22-4	78.00		
Gold		7440-57-5	Wire Bond	0.950	0.965	9,500			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	4.410	4.481	44,100			Treated silica	Trade Secret	2.00		
									Heterocyclic organic compound	Trade Secret	2.00		
TOTALS: 100.000 101.600 1,000,000								Total		100.00			
0.1016 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 <a href="http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/">http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/</a>													
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 <a href="http://echa.europa.eu/web/guest/candidate-list-table">http://echa.europa.eu/web/guest/candidate-list-table</a>													
						101.600		100.000					

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