



Semiconductor Device Type: PMA 44 VQFN 7x7x0.9mm MatteTin				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			J-STD-609A Product Marking and/or Pkg. Labeling e3
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	(mg) Total	Mold Compound	% of Total Weight		
Silica, vitreous (or fused)	60676-86-0	Mold Compound	41.446	52.885	414.460	62.22	Silica, vitreous (or fused) Epoxy Resin Phenolic Resin Carbon Black	60676-86-0 Trade Secret Trade Secret 1333-86-4	85.00 8.70 6.00 0.30	48.76
Epoxy Resin	Trade Secret	Mold Compound	4.242	5.413	42.421					
Phenolic Resin	Trade Secret	Mold Compound	2.926	3.733	29.256					
Carbon Black	1333-86-4	Mold Compound	0.146	0.187	1.463					
Copper	7440-50-8	Lead Frame	44.963	57.373	449.628					
Nickel	7440-02-0	Lead Frame	1.199	1.530	11.991	60.24	Lead Frame	95.24 2.54 1.67 0.45 0.10	47.21	
Silver	7440-22-4	Lead Frame	0.788	1.006	7.884					
Silicon	7440-21-3	Lead Frame	0.212	0.271	2.124					
Magnesium	7439-95-4	Lead Frame	0.047	0.060	472					
Silver	7440-22-4	Die Attach	0.400	0.510	3.996					
Epoxy resin	68475-94-5	Die Attach	0.124	0.158	1.242	0.69	Die Attach	74.00 23.00 3.00	0.54	
Copper(II) oxide	1317-38-0	Die Attach	0.016	0.021	162					
Silicon	7440-21-3	Chip (Die)	0.790	1.008	7.900					
Gold	7440-57-5	Wire Bond	1.470	1.876	14.700					
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.230	1.569	12.300					
TOTALS:			100.000	127.600	1,000,000	100.00				
0.1276 g Total Mass										
<p>This semiconductor device and its homogeneous 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))</p> <p>Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.</p> <p>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.</p> <p>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/offerings/industries/chemicals/plastics/</p> <p>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.</p> <p>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.</p> <p>Microchip Technology Incorporated does not provide any warranty, express or implied, with respect to the information provided in this declaration. The exclusive, limited product warranties provided by Microchip Technology Incorporated and its subsidiaries are contained in Microchip's standard terms and conditions of sale. These are provided in Microchip's quotations, sales order acknowledgement, and invoices.</p> <p>Microchip disclaims any duty to notify users of updates or changes to Material Content Declarations and shall not be liable for any damages, direct or indirect, consequential or otherwise, suffered by users or third parties as a result of the users' reliance on the information in Material Content Declarations (MCD) or independent third party test reports (SGS) or of this Certificate of Compliance for semiconductor products.</p> <p>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</p>										
						1.01	Total (mg)	Chip (Die)	% of Total Weight	0.79
						Doped Silicon		7440-21-3	100.00	
						Total		100.00		
						1.88	(mg) Total	Wire Bond	% of Total Weight	1.47
						Gold		7440-57-5	100.00	
						Total		100.00		
						1.57	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.23
						Tin		7440-31-5	100.00	
						Total		100.00		

127.60

100.00