



Semiconductor Device Type: MD (M8X) 008 DFN 4x4x0.9mm Matte Tin				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			JEDEC 97 Product Marking and/or Pkg. Labeling e3
Basic Substance	CAS Number	Contained In Sub-Component	% Total Weight	mg/part	ppm	19.20	(mg) Total	Mold Compound	% of Total Weight	42.76
Silica, fused	60676-86-0	Mold Compound	38.484	17.279	384,840		Silica, fused	60676-86-0	90.00	
Epoxy Resin	Trade Secret	Mold Compound	2.074	0.931	20,739		Epoxy Resin	Trade Secret	4.85	
Phenolic Resin	Trade Secret	Mold Compound	2.074	0.931	20,739		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.128	0.058	1,283		Carbon Black	1333-86-4	0.30	
Copper	7440-50-8	Lead Frame	44.970	20.191	449,695		Total 100.00			
Iron	7439-89-6	Lead Frame	1.106	0.497	11,061	21.13	(mg) Total	Lead Frame	% of Total Weight	47.07
Silver	7440-22-4	Lead Frame	0.897	0.403	8,967		Copper	7440-50-8	95.54	
Zinc	7440-66-6	Lead Frame	0.059	0.026	588		Iron	7439-89-6	2.35	
Phosphorous	7723-14-0	Lead Frame	0.039	0.017	388		Silver	7440-22-4	1.91	
Silver	7440-22-4	Die Attach	0.889	0.399	8,892		Zinc	7440-66-6	0.13	
Epoxy resin	Trade Secret	Die Attach	0.234	0.105	2,340		Phosphorous	7723-14-0	0.08	
Copper	7440-50-8	Die Attach	0.047	0.021	468		Total 100.00			
Silicon	7440-21-3	Chip (Die)	5.470	2.456	54,700	0.53	(mg) Total	Die Attach	% of Total Weight	1.17
Copper	7440-50-8	Wire Bond Copper palladium coated (CuPd)	0.314	0.141	3,144		Silver	7440-22-4	76.00	
Palladium	7440-05-3	Wire Bond Copper palladium coated (CuPd)	0.006	0.003	56		Epoxy resin	Trade Secret	20.00	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	3.210	1.441	32,100		Copper	7440-50-8	4.00	
TOTALS:			100.000	44.900	1,000,000	Total 100.00				
0.0449 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)						2.46	Total (mg)	Chip (Die)	% of Total Weight	5.47
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.							Doped Silicon	7440-21-3	100.00	
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.						Total 100.00				
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/						0.14	(mg) Total	Wire Bond Copper palladium coated (CuPd)	% of Total Weight	0.32
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.							Copper	7440-50-8	98.25	
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.							Palladium	7440-05-3	1.75	
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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.						1.44	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	3.21
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							Tin	7440-31-5	100.00	
						Total 100.00				
						44.900				100.000