

MICROCHIP			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			J-STD-609A Product Marking and/or Pkg. Labeling e3		
Semiconductor Device Type: G4X 020 QFN 4x4x0.9mm Matte Tin											
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	20.37	(mg) Total	Mold Compound	% of Total Weight	47.26	
Silica Fused	60676-86-0	Mold Compound	41.716	17.980	417,164	19.30	Silica Fused	60676-86-0	88.27	44.78	
Epoxy Resin	Trade Secret	Mold Compound	2.949	1.271	29,490		Epoxy Resin	Trade Secret	6.24		
Phenol Resin	Trade Secret	Mold Compound	2.453	1.057	24,528		Phenol Resin	Trade Secret	5.19		
Carbon Black	1333-86-4	Mold Compound	0.142	0.061	1,418		Carbon Black	1333-86-4	0.30		
Copper	7440-50-8	Lead Frame	42.782	18.439	427,817		Total 100.00				
Iron	7439-89-6	Lead Frame	1.052	0.454	10,523	0.97	(mg) Total	Lead Frame	% of Total Weight	2.24	
Silver	7440-22-4	Lead Frame	0.853	0.368	8,531		Copper	7440-50-8	95.54		
Zinc	7440-66-6	Lead Frame	0.056	0.024	560		Iron	7439-89-6	2.35		
Phosphorous	7723-14-0	Lead Frame	0.037	0.016	369		Silver	7440-22-4	1.91		
Silver	7440-22-4	Die Attach	1.725	0.743	17,248		Zinc	7440-66-6	0.13		
Acrylic Resin	Trade secret	Die Attach	0.314	0.135	3,136	1.62	Phosphorous	7723-14-0	0.08	3.76	
Epoxy Resin	Trade secret	Die Attach	0.202	0.087	2,016		Total 100.00				
Silicon	7440-21-3	Dual Chip (Die)	3.760	1.621	37,600		(mg) Total	Die Attach	% of Total Weight		
Copper	7440-50-8	Wire Bond Copper palladium coated (CuPdAu)	0.441	0.190	4,406		Silver	7440-22-4	77.00		
Palladium	7440-05-3	Wire Bond Copper palladium coated (CuPdAu)	0.009	0.004	90		Acrylic Resin	Trade secret	14.00		
Gold	7440-57-5	Wire Bond Copper palladium coated (CuPdAu)	0.000	0.000	5	0.19	Epoxy Resin	Trade secret	9.00	0.45	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.510	0.651	15,100		Total 100.00				
TOTALS:			100.000	43.100	1,000,000		Total (mg)	Dual Chip (Die)	% of Total Weight		
0.0431 g Total Mass							Doped Silicon	7440-21-3	100		
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 2000/53/EC and 2016/774/EU (End-of-Life Vehicles (ELV) without exemption (zero)						Total 100.00					
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.						0.65	(mg) Total	Wire Bond Copper palladium coated (CuPdAu)	% of Total Weight	1.51	
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.							Copper	7440-50-8	97.90		
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/							Palladium	7440-05-3	2.00		
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.							Gold	7440-57-5	0.10		
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.							Total 100.00				
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.						43.100	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	100.00	
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.							Tin	7440-31-5	100.00		
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							Total 100.00				
						43.100			100.000		