



Semiconductor Device Type: G4X 020 QFN 4x4x0.9mm Matte Tin			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			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 Fused	60676-86-0	Mold Compound	41.716	17.980	417,164	20.37			47.26
Epoxy Resin	Trade Secret	Mold Compound	2.949	1.271	29,490				
Phenol Resin	Trade Secret	Mold Compound	2.453	1.057	24,528				
Carbon Black	1333-86-4	Mold Compound	0.142	0.061	1,418				
Copper	7440-50-8	Lead Frame	42.782	18.439	427,817				
Iron	7439-89-6	Lead Frame	1.052	0.454	10,523	19.30			44.78
Silver	7440-22-4	Lead Frame	0.853	0.368	8,531				
Zinc	7440-66-6	Lead Frame	0.056	0.024	560				
Phosphorous	7723-14-0	Lead Frame	0.037	0.016	369				
Silver	7440-22-4	Die Attach	1.725	0.743	17,248				
Acrylic Resin	Trade secret	Die Attach	0.314	0.135	3,136				
Epoxy Resin	Trade secret	Die Attach	0.202	0.087	2,016				
Silicon	7440-21-3	Dual Chip (Die)	3.760	1.621	37,600	0.97			2.24
Copper	7440-50-8	Wire Bond Copper palladium coated (CuPdAu)	0.441	0.190	4,406				
Palladium	7440-05-3	Wire Bond Copper palladium coated (CuPdAu)	0.009	0.004	90				
Gold	7440-57-5	Wire Bond Copper palladium coated (CuPdAu)	0.000	0.000	5				
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.510	0.651	15,100				
0.0431 g Total Mass			TOTALS:	100.000	43.100	1,000,000			
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 (mg)			3.76
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.						Dual Chip (Die)			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.						Doped Silicon			100
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/						Total			100.00
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.						Wire Bond Copper palladium coated (CuPdAu)			0.45
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.						Copper			97.90
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.						Palladium			2.00
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) of this Certificate of Compliance for semiconductor products.						Gold			0.10
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
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.						Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour			1.51
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) of this Certificate of Compliance for semiconductor products.						Tin			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
						Total (mg)			43.100
						Dual Chip (Die)			100.00
						Doped Silicon			100
						Total			100.00
						Wire Bond Copper palladium coated (CuPdAu)			0.45
						Copper			97.90
						Palladium			2.00
						Gold			0.10
						Total			100.00
						Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour			1.51
						Tin			100.00
						Total			100.00
						Total (mg)			43.100
						Dual Chip (Die)			100.00
						Doped Silicon			100
						Total			100.00