



 MICROCHIP						Termination Base Alloy: Copper Alloy (Cu)		Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Pkg. and/or Pkg. Labeling e3	
Semiconductor Device Type: SS (G3X) 020 SSOP .209in Matte Tin												
Basic Substance		CAS Number	"Contained In" Sub-Component		% Total Weight	mg/part	ppm	131.03	(mg) Total	Mold Compound	% of Total Weight	79.8
Silica, vitreous		60676-86-0	Mold Compound		69.354	113.880	693,542		Silica, vitreous	60676-86-0	86.91	
Epoxy Resin (No bromine, No diantimony trioxide)		Trade Secret	Mold Compound		6.121	10.050	61,207		Epoxy Resin	Trade Secret	7.67	
Phenolic Resin (No Br / CL SbO3, No diantimony trioxide)		Trade Secret	Mold Compound		4.078	6.696	40,778		Phenolic Resin	Trade Secret	5.11	
Carbon Black		1333-86-4	Mold Compound		0.247	0.406	2,474		Carbon Black	1333-86-4	0.31	
Copper		7440-50-8	Lead Frame		10.031	16.472	100,314	Total		100.00		
Iron		7439-89-6	Lead Frame		0.247	0.405	2,468	17.24	(mg) Total	Lead Frame	% of Total Weight	10.5
Silver		7440-22-4	Lead Frame		0.200	0.328	2,000		Copper	7440-50-8	95.54	
Zinc		7440-66-6	Lead Frame		0.013	0.022	131		Iron	7439-89-6	2.35	
Phosphorous		7723-14-0	Lead Frame		0.009	0.014	87		Silver	7440-22-4	1.91	
Silver (Ag)		7440-22-4	Die Attach		0.563	0.924	5,625		Zinc	7440-66-6	0.13	
Modified Epoxy Resin		13561-08-5	Die Attach		0.105	0.172	1,050		Phosphorous	7723-14-0	0.08	
Diglycidylether of bisphenol-F		54208-63-8	Die Attach		0.056	0.092	563	Total		100.00		
Modified Amine		827-43-0	Die Attach		0.026	0.043	263	1.23	(mg) Total	Die Attach	% of Total Weight	0.75
Silicon		7440-21-3	Chip (Die)		7.500	12.315	75,000		Silver (Ag)	7440-22-4	75.00	
Doped Gold		7440-57-5	Wire Bond		0.200	0.328	2,000		Modified Epoxy Resin	13561-08-5	14.00	
									Diglycidylether of bisphenol-F	54208-63-8	7.50	
Tin		7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour		1.250	2.053	12,500		Modified Amine	827-43-0	3.50	
					TOTALS:	100.000	164.200	1,000,000	Total		100.00	
0.1642 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 http://ul.com/global/eng/pages/offering/industries/chemicals/plastics/												
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.												
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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 http://echa.europa.eu/web/guest/candidate-list-table												