



Semiconductor Device Type: (CAA) 048 LQFP 07x07x1.6mm 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	131.99	(mg) Total	Mold Compound	% of Total Weight	84.88
Silica, vitreous (or fused)	60676-86-0	Mold Compound	72.148	112.190	721.480			60676-86-0	85.00	
Epoxy Resin	Trade Secret	Mold Compound	7.385	11.483	73.846			Epoxy Resin	8.70	
Phenolic Resin	Trade Secret	Mold Compound	5.093	7.919	50.928			Phenolic Resin	6.00	
Carbon Black	1333-86-4	Mold Compound	0.255	0.396	2.546			Carbon Black	0.30	
Copper	7440-50-8	Lead Frame	9.448	14.691	94.479			Total	100.00	
Nickel	7440-02-0	Lead Frame	0.252	0.392	2.520	15.43	(mg) Total	Lead Frame	% of Total Weight	9.92
Silver	7440-22-4	Lead Frame	0.166	0.257	1.656			Copper	95.24	
Silicon	7440-21-3	Lead Frame	0.045	0.069	446			Nickel	2.54	
Magnesium	7439-95-4	Lead Frame	0.010	0.015	99			Silver	1.67	
Silver	7440-22-4	Die Attach	0.447	0.694	4.466			Silicon	0.45	
Acrylic Resin	Trade secret	Die Attach	0.081	0.126	812			Magnesium	0.10	
Epoxy Resin	Trade secret	Die Attach	0.052	0.081	522			Total	100.00	
Silicon	7440-21-3	Chip (Die)	0.820	1.275	8,200	0.90	(mg) Total	Die Attach	% of Total Weight	0.58
Gold	7440-57-5	Wire Bond	0.330	0.513	3,300			Silver	77.00	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	3.470	5.396	34,700			Acrylic Resin	14.00	
		TOTALS:	100.000	155.500	1,000,000			Epoxy Resin	9.00	
		0.1555g Total Mass						Total	100.00	
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										
						1.28	Total (mg)	Chip (Die)	% of Total Weight	0.82
								Doped Silicon	100.00	
								Total	100.00	
						0.51	(mg) Total	Wire Bond	% of Total Weight	0.33
								Gold	100.00	
								Total	100.00	
						5.40	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	3.47
								Tin	100.00	
								Total	100.00	

155.50

100.00