



Semiconductor Device Type: PH (R9X) 144 TQFP 16x16x1mm Matte Tin				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Marking and/or Pkg. Labeling e3
Basic Substance	CAS Number	Contained in Sub-Component	% Total Weight	mg/part	ppm	467.72	(mg) Total	Mold Compound	% of Total Weight	68.23
Silica, vitreous (or fused)	60676-86-0	Mold Compound	57.996	397.559	579,955			Silica, vitreous (or fused)	60676-86-0	85.00
Epoxy Resin	Trade Secret	Mold Compound	5.936	40.691	59,360			Epoxy Resin	Trade Secret	8.70
Phenolic Resin	Trade Secret	Mold Compound	4.094	28.063	40,938			Phenolic Resin	Trade Secret	6.00
Carbon Black	1333-86-4	Mold Compound	0.205	1.403	2,047			Carbon Black	1333-86-4	0.30
Copper	7440-50-8	Lead Frame	26.955	184.775	269,547			Total 100.00		
Tin	7440-31-5	Lead Frame	0.069	0.474	692	189.68	(mg) Total	Lead Frame	% of Total Weight	27.67
Silver	7440-22-4	Lead Frame	0.527	3.613	5,271			Copper	7440-50-8	97.42
Zinc	7440-66-6	Lead Frame	0.050	0.341	498			Tin	7440-31-5	0.25
Chromium	7440-47-3	Lead Frame	0.069	0.474	692			Silver	7440-22-4	1.91
Silver (Ag)	7440-22-4	Die Attach	0.423	2.902	4,233			Zinc	7440-66-6	0.18
ANHYDRIDE	Trade Secret	Die Attach	0.046	0.315	459			Chromium	7440-47-3	0.25
EPOXY RESIN	Trade Secret	Die Attach	0.041	0.280	408			Total 100.00		
Silicon	7440-21-3	Chip (Die)	2.090	14.327	20,900	3.50	(mg) Total	Die Attach	% of Total Weight	0.51
Doped Gold	7440-57-5	Wire Bond	0.280	1.919	2,800			Silver (Ag)	7440-22-4	83.00
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.220	8.363	12,200			ANHYDRIDE	Trade Secret	9.00
TOTALS:			100.000	685.500	1,000,000			EPOXY RESIN	Trade Secret	8.00
0.6855 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/offers/industries/chemicals/plastics/										
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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										
							685.500			100.000