Semiconductor Device Type: CGA 80 LQFP 10x10x1.4mm Matte Tin

Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
			Termination Base Alloy: Copper Alloy (Cu)		
Silica Fused	60676-86-0	Mold Compound	65.346	232.502	653,463
Epoxy Resin	Trade Secret	Mold Compound	4.619	16.436	46,195
Phenol Resin	Trade Secret	Mold Compound	3.842	13.670	38,422
Carbon Black	1333-86-4	Mold Compound	0.222	0.790	2,221
Copper	7440-50-8	Lead Frame	21.324	75.872	213,245
Nickel	7440-02-0	Lead Frame	0.569	2.023	5,687
Silver	7440-22-4	Lead Frame	0.374	1.330	3,737
Silicon	7440-21-3	Lead Frame	0.101	0.358	1,008
Magnesium	7439-95-4	Lead Frame	0.022	0.080	224
Silver (Ag)	7440-22-4	Die Attach	0.349	1.240	3,486
Acrylate Resin	Trade Secret	Die Attach	0.038	0.134	378
Epoxy Resin	Trade Secret	Die Attach	0.023	0.082	231
Epoxy Resin	9003-36-5	Die Attach	0.011	0.037	105
Silicon	7440-21-3	Chip (Die)	1.860	6.618	18,600
Copper	7440-50-8	Wire Bond	0.245	0.872	2,450
Palladium	7440-05-3	Wire Bond	0.005	0.018	50
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.050	3.736	10,500
		TOTALS:	**100.000**	**355.800**	**1,000,000**

0.3558 g Total Mass

Package Homogeneous Materials — **J-STD-609A Product Marking and/or Pkg. Labeling e3**

263.40	**(mg) Total**	**Mold Compound**	**% ot Total Weight**	**74.03**
	Silica Fused	60676-86-0	88.27	
	Epoxy Resin	Trade Secret	6.24	
	Phenol Resin	Trade Secret	5.19	
	Carbon Black	1333-86-4	0.30	
		Total	**100.00**	
79.66	**(mg) Total**	**Lead Frame**	**% of Total Weight**	**22.39**
	Copper	7440-50-8	95.24	
	Nickel	7440-02-0	2.54	
	Silver	7440-22-4	1.67	
	Silicon	7440-21-3	0.45	
	Magnesium	7439-95-4	0.10	
		Total	**100.00**	
1.49	**(mg) Total**	**Die Attach**	**% of Total Weight**	**0.42**
	Silver (Ag)	7440-22-4	83.00	
	Acrylate Resin	Trade Secret	9.00	
	Epoxy Resin	Trade Secret	5.50	
	Epoxy Resin	9003-36-5	2.50	
		Total	**100.00**	
6.62	**Total (mg)**	**Chip (Die)**	**% of Total Weight**	**1.86**
	Doped Silicon	7440-21-3	100	
		Total	**100.00**	
0.89	**(mg) Total**	**Wire Bond**	**% of Total Weight**	**0.25**
	Copper	7440-50-8	98.00	
	Palladium	7440-05-3	2.00	
		Total	**100.00**	
3.74	**(mg) Total**	**Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour**	**% of Total Weight**	**1.05**
	Tin	7440-31-5	100.00	
		Total	**100.00**	
355.800				**100.000**

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 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/offerings/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.

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.

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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