



 Microchip			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																																																																																																				
Semiconductor Device Type: L / NJE (T2X) 044 PLCC Matte Tin																																																																																																													
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	1807.79 (mg) Total	Mold Compound	% of Total Weight	76.1																																																																																																				
Silica, vitreous	60676-86-0	Mold Compound	64.685	1536.618	646,850	<table><tr><td>Silica, vitreous</td><td>60676-86-0</td><td>85.00</td></tr><tr><td>Epoxy Resin</td><td>Trade Secret</td><td>6.13</td></tr><tr><td>Phenolic Resin</td><td>Trade Secret</td><td>6.13</td></tr><tr><td>Epoxy, Cresol Novolac</td><td>29690-82-2</td><td>2.45</td></tr><tr><td>Carbon Black</td><td>1333-86-4</td><td>0.30</td></tr><tr><td colspan="3">Total 100.00</td></tr></table>	Silica, vitreous	60676-86-0	85.00	Epoxy Resin	Trade Secret	6.13	Phenolic Resin	Trade Secret	6.13	Epoxy, Cresol Novolac	29690-82-2	2.45	Carbon Black	1333-86-4	0.30	Total 100.00			<table><tr><td>520.24 (mg) Total</td><td>Lead Frame</td><td>% of Total Weight</td><td>21.9</td></tr><tr><td>Copper</td><td>7440-50-8</td><td>97.99</td><td></td></tr><tr><td>Silver</td><td>7440-22-4</td><td>1.91</td><td></td></tr><tr><td>Zirconium</td><td>7440-67-7</td><td>0.10</td><td></td></tr><tr><td>Manganese</td><td>7439-96-5</td><td>0.01</td><td></td></tr><tr><td colspan="3">Total 100.00</td><td></td></tr></table>	520.24 (mg) Total	Lead Frame	% of Total Weight	21.9	Copper	7440-50-8	97.99		Silver	7440-22-4	1.91		Zirconium	7440-67-7	0.10		Manganese	7439-96-5	0.01		Total 100.00				<table><tr><td>3.33 (mg) Total</td><td>Die Attach</td><td>% of Total Weight</td><td>0.14</td></tr><tr><td>Silver</td><td>7440-22-4</td><td>74.00</td><td></td></tr><tr><td>Epoxy resin</td><td>Trade Secret</td><td>23.00</td><td></td></tr><tr><td>Gamma-butyrolactone</td><td>96-48-0</td><td>3.00</td><td></td></tr><tr><td colspan="3">Total 100.00</td><td></td></tr></table>	3.33 (mg) Total	Die Attach	% of Total Weight	0.14	Silver	7440-22-4	74.00		Epoxy resin	Trade Secret	23.00		Gamma-butyrolactone	96-48-0	3.00		Total 100.00				<table><tr><td>20.67 Total (mg)</td><td>Chip (Die)</td><td>% of Total Weight</td><td>0.87</td></tr><tr><td>Doped Silicon</td><td>7440-21-3</td><td>100.00</td><td></td></tr><tr><td colspan="3">Total 100.00</td><td></td></tr></table>	20.67 Total (mg)	Chip (Die)	% of Total Weight	0.87	Doped Silicon	7440-21-3	100.00		Total 100.00				<table><tr><td>1.19 (mg) Total</td><td>Wire Bond</td><td>% of Total Weight</td><td>0.05</td></tr><tr><td>Doped Gold</td><td>7440-57-5</td><td>100.00</td><td></td></tr><tr><td colspan="3">Total 100.00</td><td></td></tr></table>	1.19 (mg) Total	Wire Bond	% of Total Weight	0.05	Doped Gold	7440-57-5	100.00		Total 100.00				<table><tr><td>22.33 (mg) Total</td><td>Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour</td><td>% of Total Weight</td><td>0.94</td></tr><tr><td>Tin</td><td>7440-31-5</td><td>100.00</td><td></td></tr><tr><td colspan="3">Total 100.00</td><td></td></tr></table>	22.33 (mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	0.94	Tin	7440-31-5	100.00		Total 100.00			
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Trade Secret	Trade Secret	Mold Compound	4.661	110.727	46,611																																																																																																								
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29690-82-2	29690-82-2	Mold Compound	1.864	44.291	18,645																																																																																																								
1333-86-4	1333-86-4	Mold Compound	0.228	5.423	2,283																																																																																																								
7440-50-8	7440-50-8	Lead Frame	21.460	509.786	214,598																																																																																																								
7440-22-4	7440-22-4	Lead Frame	0.417	9.911	4,172																																																																																																								
7440-67-7	7440-67-7	Lead Frame	0.022	0.520	219																																																																																																								
7439-96-5	7439-96-5	Lead Frame	0.001	0.026	11																																																																																																								
7440-22-4	7440-22-4	Die Attach	0.104	2.461	1,036																																																																																																								
Trade Secret	Trade Secret	Die Attach	0.032	0.765	322																																																																																																								
96-48-0	96-48-0	Die Attach	0.004	0.100	42																																																																																																								
7440-21-3	7440-21-3	Chip (Die)	0.870	20.667	8,700																																																																																																								
7440-57-5	7440-57-5	Wire Bond	0.050	1.188	500																																																																																																								
7440-31-5	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	0.940	22.330	9,400																																																																																																								
TOTALS:			100.000	2,375.540	1,000,000																																																																																																								
2.3755 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/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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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) or of this Certificate of Compliance for semiconductor products.																																																																																																													
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																																																																																																													
			2,375.540		100.000																																																																																																								