



			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			J-STD-609A Product Marking and/or Pkg. Labeling e3	
Semiconductor Device Type: T3X 044 QFN 8x8x0.9mm Matte Tin										
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	82.80	(mg) Total	Mold Compound	% of Total Weight	43.95
Silica, vitreous (or fused)	60676-86-0	Mold Compound	37.358	70.382	373,575		Silica, vitreous (or fused)	60676-86-0	85.00	
Epoxy Resin	Trade Secret	Mold Compound	3.824	7.204	38,237		Epoxy Resin	Trade Secret	8.70	
Phenolic Resin	Trade Secret	Mold Compound	2.637	4.988	26,370		Phenolic Resin	Trade Secret	6.00	
Carbon Black	1333-86-4	Mold Compound	0.132	0.248	1,319		Carbon Black	1333-86-4	0.30	
Copper	7440-50-8	Lead Frame	47.904	90.251	479,038	Total 100.00				
Iron	7439-89-6	Lead Frame	1.178	2.220	11,783	94.46	(mg) Total	Lead Frame	% of Total Weight	50.14
Silver	7440-22-4	Lead Frame	0.953	1.795	9,527		Copper	7440-50-8	95.54	
Zinc	7440-66-6	Lead Frame	0.065	0.123	652		Iron	7439-89-6	2.35	
Phosphorous	7723-14-0	Lead Frame	0.040	0.076	401		Silver	7440-22-4	1.90	
Silver	7440-22-4	Die Attach	1.326	2.499	13,264		Zinc	7440-66-6	0.13	
(Octahydro-4,7-methano-1H-indenediyl)bis(methylene) diacrylate	42594-17-2	Die Attach	0.091	0.172	912		Phosphorous	7723-14-0	0.08	
Methacrylic acid, isobornyl ester	7534-94-3	Die Attach	0.091	0.172	912	Total 100.00				
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acrylate	5888-33-5	Die Attach	0.091	0.172	912	3.01	(mg) Total	Die Attach	% of Total Weight	1.6
Silicon	7440-21-3	Dual Chip (Die)	2.830	5.332	28,300		Silver	7440-22-4	82.90	
Copper	7440-50-8	Wire Bond Copper palladium coated (CuPdAu)	0.235	0.443	2,350		Octahydro-4,7-methano-1H-indenediyl)bis(m	42594-17-2	5.70	
Palladium	7440-05-3	Wire Bond Copper palladium coated (CuPdAu)	0.005	0.009	48		Methacrylic acid, isobornyl es	7534-94-3	5.70	
Gold	7440-57-5	Wire Bond Copper palladium coated (CuPdAu)	0.000	0.000	2		Exo-1,7,7-trimethylbicyclo[2.2.1]hept-	5888-33-5	5.70	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150 °C for 1 hour	1.240	2.336	12,400	Total 100.00				
TOTALS:			100.000	188.400	1,000,000	5.33	Total (mg)	Dual Chip (Die)	% of Total Weight	2.83
0.1884 g Total Mass							Doped Silicon	7440-21-3	100	
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 2000/53/EC and 2016/774/EU (End-of-Life Vehicles (ELV) without exemption (zero))						Total 100.00				
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 <a href="http://iql.ul.com/plastics/">http://iql.ul.com/plastics/</a>										
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 <a href="http://echa.europa.eu/web/guest/candidate-list-table">http://echa.europa.eu/web/guest/candidate-list-table</a>										

0.45			(mg) Total	Wire Bond	% of Total Weight	0.24
			Copper	7440-50-8	97.90	
			Palladium	7440-05-3	2.00	
			Gold	7440-57-5	0.10	
			Total		100.00	

2.34			(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.24
			Tin	7440-31-5	100.00	
			Total		100.00	

188.400			100.000		
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