Semiconductor Device Type: MR / RG (R4X) 064 QFN 9x9x0.9mm Matter Tin				Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			
Semiconductor Device	e Type. MIK / KG	"Contained In"	% Total	1	, I					e3
Basic Substance	CAS Number	Sub-Component	Weight	mg/part	ppm	10.41	(mg) Total	Mold Compound	% ot Total Weight	4.48
Silica, fused	60676-86-0	Mold Compound	4.032	9.370	40,320		Silica, fused	60676-86-0	90.00	1
Epoxy Resin	Trade Secret	Mold Compound	0.217	0.505	2,173		Epoxy Resin	Trade Secret	4.85	
Phenolic Resin	Trade Secret	Mold Compound	0.217	0.505	2,173		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.013	0.031	134		Carbon Black	1333-86-4	0.30	
Copper	7440-50-8	Lead Frame	40.914	95.085	409,143			Total		
Tin	7440-31-5	Lead Frame	0.105	0.244	1,050	97.61	(mg) Total	Lead Frame	% of Total Weight	42
Silver	7440-22-4	Lead Frame	0.800	1.859	8,001		Copper	7440-50-8	97.42	
Zinc	7440-66-6	Lead Frame	0.076	0.176	756		Tin	7440-31-5	0.25	
Chromium	7440-47-3	Lead Frame	0.105	0.244	1,050		Silver	7440-22-4	1.91	
Silver	7440-22-4	Die Attach	1.888	4.387	18,876		Zinc	7440-66-6	0.18	
Acrylate resins Proprietary	Trade Secret	Die Attach	0.436	1.012	4,356		Chromium	7440-47-3	0.25	
Treated silica	Trade Secret	Die Attach	0.048	0.112	484			Total	100.00	
Heterocyclic organic compound	Trade Secret	Die Attach	0.048	0.112	484	5.62	(mg) Total	Die Attach	% of Total Weight	2.42
Silicon	7440-21-3	Chip (Die)	6.000	13.944	60,000		Silver	7440-22-4	78.00	
Gold	7440-57-5	Wire Bond	0.970	2.254	9,700		Acrylate resins Proprietary	/ Trade Secret	18.00	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	44.130	102.558	441,300		Treated silica	Trade Secret	2.00	
		TOTALS:	100.000	232.400	1,000,000	Hete	erocyclic organic compound	Trade Secret	2.00	
	0 2324	g Total Mass						Total	100.00	
) and 2002/53/EC (End-of-Life Vehicles (ELV) without ex	kemption (zero)	: 2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 Ji Is, supplier declarations, and /or analytical test data.	une 2011) and	2015/863/EU (3	31 March	13.94	Total (mg) Doped Silicon	Chip (Die) 7440-21-3	% of Total Weight	6
) and 2002/53/EC (End-of-Life Vehicles (ELV) without ex pliance with the above EU Directives has been verified hemical substance is absent from the list above, the ct porated's knowledge and belief as of the date of this d	xemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi	Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra	the best of Mi	crochip Techr	nology	13.94	,	,		6
) and 2002/53/EC (End-of-Life Vehicles (ELV) without ex- pliance with the above EU Directives has been verified hemical substance is absent from the list above, the cl 'porated's knowledge and belief as of the date of this d selow the threshold of regulatory concern for any regul ing compounds used by Microchip meet the UL94 V0 f	xemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi atory scheme world-wide. lammability standard for p	Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra	o the best of Mi ation of the ch	crochip Techr emical substa	nology	2.25	,	7440-21-3	100.00	
and 2002/53/EC (End-of-Life Vehicles (ELV) without expliance with the above EU Directives has been verified shemical substance is absent from the list above, the chrorated's knowledge and belief as of the date of this doelow the threshold of regulatory concern for any regul ting compounds used by Microchip meet the UL94 V0 fi/ul.com/global/eng/pages/offerings/industries/chemica protective "tubes" in which the specific product is ship	xemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi atory scheme world-wide. lammability standard for p als/plastics/	is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra	the best of Mi ation of the ch obtain a test re	icrochip Techr emical substa port at	nology nce, if any, is		(mg) Total	7440-21-3 Total Wire Bond	100.00 100.00 % of Total Weight	
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5) and 2002/53/EC (End-of-Life Vehicles (ELV) without ex- npliance with the above EU Directives has been verified chemical substance is absent from the list above, the cf orporated's knowledge and belief as of the date of this d below the threshold of regulatory concern for any regul ding compounds used by Microchip meet the UL94 V0 f ://ul.com/global/eng/pages/offerings/industries/chemica protective "tubes" in which the specific product is ship ain "reels" may be made from PVC plastic. rochip Technology Incorporated believes the informatio r original packing materials is true and correct to the be pleteness and accuracy of data in this form because it I rmation is often protected from disclosure as trade sec vided only as estimates of the average weight of these p	kemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi atory scheme world-wide. lammability standard for p als/plastics/ oped are made from polyvi n in this form concerning st of its knowledge and be has been compiled based rets and some information arts and the average weig	Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra- lastics. You can access the UL iQTM family of databases to o nyl chloride (PVC) plastic. "Window envelopes" used to hold substances restricted by RoHS in Microchip Technology Inco- lief, as of the date listed in this form. Microchip Technology Inco- lief, as of the date listed in Material Safety Data Sheets provid may not have been provided by subcontract assemblers and ht of anticipated significant toxic metals components. These	the best of Mi ation of the ch obtain a test rej the packing sl prporated's ser incorporated c ed by raw matk f raw material i	icrochip Techr emical substa port at lip on the oute miconductor d annot guarant erial suppliers. Info	nology nce, if any, is r box and evices in ee the . Supplier rmation is		(mg) Total	T440-21-3 Total Wire Bond 7440-57-5	100.00 100.00 % of Total Weight	
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5) and 2002/53/EC (End-of-Life Vehicles (ELV) without ex- npliance with the above EU Directives has been verified chemical substance is absent from the list above, the cl orporated's knowledge and belief as of the date of this d below the threshold of regulatory concern for any regul ding compounds used by Microchip meet the UL94 V0 f .'/ul.com/global/eng/pages/offerings/industries/chemica protective "tubes" in which the specific product is ship ain "reels" may be made from PVC plastic. rochip Technology Incorporated believes the informatio r original packing materials is true and correct to the be pleteness and accuracy of data in this form because it i rmation is often protected from disclosure as trade sec vided only as estimates of the average weight of these p ants, metals, and non-metal materials contained within rochip Technology Incorporated does not provide any w ranties provided by Microchip Technology Incorporated tations, sales order acknowledgement, and invoices. rochip disclaims any duty to notify users of updates or of	kemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi atory scheme world-wide. lammability standard for p lak/plastics/ apped are made from polyvi n in this form concerning st of its knowledge and be has been compiled based rets and some information parts and the average weig silicon devices (silicon IC) varranty, express or implie I and its subsidiaries are c changes to Material Conte	Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra- lastics. You can access the UL iQTM family of databases to o nyl chloride (PVC) plastic. "Window envelopes" used to hold substances restricted by RoHS in Microchip Technology Inco- lief, as of the date listed in this form. Microchip Technology Inco- nor the ranges provided in Material Safety Data Sheets provid may not have been provided by subcontract assemblers and ht of anticipated significant toxic metals components. These in the finished parts. d, with respect to the information provided in this declaration	the best of Mi ation of the ch obtain a test rej the packing sl proporated's ser incorporated c d by raw material estimates do r n. The exclusiv e. These are pu t or indirect, c	icrochip Techr emical substa port at lip on the oute miconductor d annot guarant erial suppliers suppliers. Info not include tra re, limited proc rovided in Mic onsequential o	nology nce, if any, is r box and evices in ee the s.Supplier rmation is ce levels of fuct rochip's or otherwise,	2.25	(mg) Total Doped Gold	7440-21-3 Total Wire Bond 7440-57-5 Total Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1	100.00 100.00 % of Total Weight 100.00 100.00	0.97
c) and 2002/53/EC (End-of-Life Vehicles (ELV) without expliance with the above EU Directives has been verified themical substance is absent from the list above, the character of this doel ow the threshold of regulatory concern for any regulating compounds used by Microchip meet the UL94 V0 f (/ul.com/global/eng/pages/offerings/industries/chemica protective "tubes" in which the specific product is ship ain "reels" may be made from PVC plastic. oochip Technology Incorporated believes the informatio original packing materials is true and correct to the be pleteness and accuracy of data in this form because it I imation is often protected from disclosure as trade secrided only as estimates of the average weight of these paints, metals, and non-metal materials contained within ochip Technology Incorporated does not provide any wanties provided by Microchip Technology Incorporated of so the propring atom is order acknowledgement, and invoices.	xemption (zero) via internal design contro nemical substance is NOT ocument, there is no credi atory scheme world-wide. lammability standard for p als/plastics/ oped are made from polyvi en in this form concerning st of its knowledge and be has been compiled based to fits knowledge and be has been compiled based staft is knowledge and be has been compiled based based been concerning staft is knowledge and be has been compiled based and based based based and its subsidiaries are con- changes to Material Conte liance on the information	Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, to ble reason to believe that the unavoidable impurity concentra- lastics. You can access the UL iQTM family of databases to o nyl chloride (PVC) plastic. "Window envelopes" used to hold substances restricted by RoHS in Microchip Technology Inco- lief, as of the date listed in this form. Microchip Technology Inco- lief, as of the date listed in Material Safety Data Sheets provid may not have been provided by subcontract assemblers and ht of anticipated significant toxic metals components. These in the finished parts. d, with respect to the information provided in this declaration ontained in Microchip's standard terms and conditions of sal- nt Declarations and shall not be liable for any damages, direc in Material Content Declarations (MCD) or independent third p	the best of Mi ation of the ch obtain a test rej the packing sl proporated's ser incorporated c d by raw material estimates do r n. The exclusiv e. These are pu t or indirect, c	icrochip Techr emical substa port at lip on the oute miconductor d annot guarant erial suppliers suppliers. Info not include tra re, limited proc rovided in Mic onsequential o	nology nce, if any, is r box and evices in ee the s.Supplier rmation is ce levels of fuct rochip's or otherwise,	2.25	(mg) Total (mg) Total (mg) Total	7440-21-3 Total Wire Bond 7440-57-5 Total Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	100.00 100.00 % of Total Weight 100.00 100.00 % of Total Weight	• 0.97 • 44.13