Compliant with IEC 62474/ D9.00

MICROCHIP			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials				J-STD-609A Product Marking and/or Pkg. Labeling
Semiconductor Device Type:		(PFA) 032 VQFN 5x5x0.9 Matte Tin								е3
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	24.81	(mg) Total	Mold Compound	% ot Total Weight	40.41
Silica, fused	60676-86-0	Mold Compound	36.369	22.331	363,690		Silica, fused	60676-86-0	90.00	
Epoxy Resin	Trade Secret	Mold Compound	1.960	1.203	19,599		Epoxy Resin	Trade Secret	4.85	
Phenolic Resin	Trade Secret	Mold Compound	1.960	1.203	19,599		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.121	0.074	1,212		Carbon Black	1333-86-4	0.30	
Copper	7440-50-8	Lead Frame	51.695	31.741	516,953			Total	100.00	
Iron	7439-89-6	Lead Frame	1.272	0.781	12,716	33.22	(mg) Total	Lead Frame	% of Total Weight	54.11
Silver	7440-22-4	Lead Frame	1.031	0.633	10,308		Copper	7440-50-8	95.54	
Zinc	7440-66-6	Lead Frame	0.068	0.042	676		Iron	7439-89-6	2.35	
Phosphorous	7723-14-0	Lead Frame	0.045	0.027	446		Silver	7440-22-4	1.91	
Silver	7440-22-4	Die Attach	0.451	0.277	4,514		Zinc	7440-66-6	0.13	
Epoxy resin	Trade Secret	Die Attach	0.140	0.086	1,403		Phosphorous	7723-14-0	0.08	
Metal oxide	Trade Secret	Die Attach	0.018	0.011	183			Total	100.00	
Silicon	7440-21-3	Chip (Die)	1.650	1.013	16,500	0.37	(mg) Total	Die Attach	% of Total Weight	0.61
Copper	7440-50-8	Wire Bond Copper palladium coated (CuPd)	1,621	0.995	16,211		Silver	7440-22-4	74.00	***
Palladium	7440-05-3	Wire Bond Copper palladium coated (CuPd)	0.029	0.018	289		Epoxy resin	Trade Secret	23.00	
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1,570	0.964	15.700		Metal oxide	Trade Secret	3.00	
····		TOTALS:	100.000	61.400	1,000,000		Wicker Chief	Total	100.00	
		TOTALS.	100.000	01.400						
	ly with EU Directives	g Total Mass: 2002/95/EC (27 January 2003) & Directive 2011/65/EU (08	June 2011) ar	nd 2015/863/EU	J (31 March	1.01	Total (mg) Doped Silicon	7440-21-3	% of Total Weight	1.65
) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt pliance with the above EU Directives has been verified via in themical substance is absent from the list above, the chemic	ly with EU Directives tion (zero) nternal design contro cal substance is NOT	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 Is, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and,	to the best of	Microchip Tec	chnology		Doped Silicon	7440-21-3 Total Wire Bond	100.00	
) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt pliance with the above EU Directives has been verified via in hemical substance is absent from the list above, the chemic rporated's knowledge and belief as of the date of this docum is not below the threshold of regulatory concern for any regi	ly with EU Directives tion (zero) nternal design contro cal substance is NOT nent, there is no cred julatory scheme work	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, lible reason to believe that the unavoidable impurity concend-wide.	to the best of	Microchip Tec	chnology	1.01		7440-21-3 Total	100.00	1.65
) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt pliance with the above EU Directives has been verified via in hemical substance is absent from the list above, the chemic porated's knowledge and belief as of the date of this docum is not below the threshold of regulatory concern for any regi ling compounds used by Microchip meet the UL94 V0 flamm. //ul.com/global/eng/pages/offerings/industries/chemicals/pla	ly with EU Directives tion (zero) nternal design contro cal substance is NOT nent, there is no cred quiatory scheme work ability standard for p astics/	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, ible reason to believe that the unavoidable impurity concend-wide.	to the best of atration of the	Microchip Tec chemical subs	chnology stance, if		Doped Silicon	7440-21-3 Total Wire Bond Copper palladium	100.00	
5) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt ppliance with the above EU Directives has been verified via inchemical substance is absent from the list above, the chemic proprated's knowledge and belief as of the date of this docum is not below the threshold of regulatory concern for any region ding compounds used by Microchip meet the UL94 V0 (flamm: 'Jul.com/global/eng/pages/offerings/industries/chemicals/pla protective "tubes" in which the specific product is shipped a	ly with EU Directives tion (zero) nternal design contro cal substance is NOT nent, there is no cred quiatory scheme work ability standard for p astics/	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, ible reason to believe that the unavoidable impurity concend-wide.	to the best of atration of the	Microchip Tec chemical subs	chnology stance, if		Doped Silicon (mg) Total	7440-21-3 Total Wire Bond Copper palladium coated (CuPd) 7440-50-8 7440-05-3	100.00 100.00 % of Total Weight 98.25 1.75	
5) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt npliance with the above EU Directives has been verified via in chemical substance is absent from the list above, the chemic proprated's knowledge and belief as of the date of this docum, is not below the threshold of regulatory concern for any regiding compounds used by Microchip meet the UL94 V0 flamm. Vi/ul.com/globa/leng/pages/offerings/industries/chemicals/plap protective "tubes" in which the specific product is shipped a ain "reels" may be made from PVC plastic. Torchip Technology Incorporated believes the information in the roriginal packing materials is true and correct to the best of inpleteness and accuracy of data in this form because it has be maded only as estimates of the average weight of these parts a vided only as estimates of the average weight of these parts.	ly with EU Directives tion (zero) nternal design contro als substance is NOT nent, there is no cred ulatory scheme work ability standard for pastics/ are made from polyvi his form concerning its knowledge and be een compiled based and some information and the average weig	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, tible reason to believe that the unavoidable impurity concerd-wide. blastics. You can access the UL iQTM family of databases to nyl chloride (PVC) plastic. "Window envelopes" used to ho substances restricted by RoHS in Microchip Technology In elilef, as of the date listed in this form. Microchip Technolog on the ranges provided in Material Safety Data Sheets prov may not have been provided by subcontract assemblers as ht of anticipated significant toxic metals components. The	to the best of tration of the poblatin a test obtain a test of the packing accorporated's cylincorporated by raw mind raw materi	Microchip Tec chemical subs report at g slip on the ou semiconducto d cannot guars atterial supplie al suppliers. Ir	chnology stance, if uter box and r devices in intee the ers. Supplier iformation is		Doped Silicon (mg) Total Copper	7440-21-3 Total Wire Bond Copper palladium coated (CuPd) 7440-50-8	100.00 100.00 % of Total Weight 98.25	
5) and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt ppliance with the above EU Directives has been verified via in chemical substance is absent from the list above, the chemic proprated's knowledge and belief as of the date of this docum, is not below the threshold of regulatory concern for any regiding compounds used by Microchip meet the UL94 V0 flamm: c://ul.com/global/eng/pages/offerings/industries/chemicals/pla protective "tubes" in which the specific product is shipped a ain "reels" may be made from PVC plastic. rochip Technology Incorporated believes the information in the original packing materials is true and correct to the best of inpleteness and accuracy of data in this form because it has be madion is often protected from disclosure as trade secrets anyided only as estimates of the average weight of these parts a opants, metals, and non-metal materials contained within sili rochip Technology Incorporated does not provide any warran ranties provided by Microchip Technology Incorporated and itations, sales order acknowledgement, and invoices.	ly with EU Directives tion (zero) ternal design contro all substance is NOT nent, there is no credulatory scheme worl ability standard for pastics/ are made from polyvi his form concerning its knowledge and be een compiled based and some information and the average weig icon devices (silicon nty, express or implie its subsidiaries are c	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, ible reason to believe that the unavoidable impurity concerd-wide. llastics. You can access the UL iQTM family of databases to nyl chloride (PVC) plastic. "Window envelopes" used to ho substances restricted by RoHS in Microchip Technology in elief, as of the date listed in this form. Microchip Technolog on the ranges provided in Material Safety Data Sheets proving the way to the date listed in this form. Microchip Technolog on the ranges provided in Material Safety Data Sheets provided by subcontract assemblers a hit of anticipated significant toxic metals components. The IC) in the finished parts. d, with respect to the information provided in this declarationtained in Microchip's standard terms and conditions of s	to the best of htration of the poblatin a test old the packing acorporated's sylncorporated idded by raw mand raw materise estimates dion. The exclusible. These are	Microchip Tec chemical subs report at g slip on the ou semiconductor d cannot guara- naterial supplie ial suppliers. Ir lo not include to sive, limited pre-	chnology stance, if uter box and r devices in intee the ers. Supplier information is trace levels		Doped Silicon (mg) Total Copper	7440-21-3 Total Wire Bond Copper palladium coated (CuPd) 7440-50-8 7440-05-3	100.00 100.00 % of Total Weight 98.25 1.75	1.65
s semiconductor device and its homogenous materials complete plant 2002/53/EC (End-of-Life Vehicles (ELV) without exempt and 2002/53/EC (End-of-Life Vehicles (ELV) without exempt plant with the above EU Directives has been verified via in chemical substance is absent from the list above, the chemic prorated's knowledge and belief as of the date of this docum, is not below the threshold of regulatory concern for any regulation of the compounds used by Microchip meet the UL94 V0 flamm: //ul.com/global/eng/pages/offerings/industries/chemicals/plaprotective "tubes" in which the specific product is shipped a ain "reels" may be made from PVC plastic. Trochip Technology Incorporated believes the information in the original packing materials is true and correct to the best of in pleteness and accuracy of data in this form because it has be mation is often protected from disclosure as trade secrets a vided only as estimates of the average weight of these parts a lopants, metals, and non-metal materials contained within sili rochip Technology Incorporated does not provide any warran ranties provided by Microchip Technology Incorporated and it attions, sales order acknowledgement, and invoices. Trochip Technology Incorporated semiconductor of updates or change revise, suffered by users or third parties as a result of the use his Certificate of Compliance for semiconductor products.	ly with EU Directives tion (zero) nternal design contro als substance is NOT nent, there is no cred ulatory scheme work ability standard for pastics/ are made from polyvi his form concerning its knowledge and be een compiled based and some information and the average weig icon devices (silicon nty, express or implie its subsidiaries are c ges to Material Conte	2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 ls, supplier declarations, and /or analytical test data. an intentional ingredient in the semiconductor device and, tible reason to believe that the unavoidable impurity concerd-wide. plastics. You can access the UL iQTM family of databases to nyl chloride (PVC) plastic. "Window envelopes" used to ho substances restricted by RoHS in Microchip Technology In elief, as of the date listed in this form. Microchip Technolog on the ranges provided in Material Safety Data Sheets prov in may not have been provided by subcontract assemblers as ht of anticipated significant toxic metals components. The IC) in the finished parts. d, with respect to the information provided in this declarationtained in Microchip's standard terms and conditions of sont Declarations and shall not be liable for any damages, dint not be liable for any damages, dint Declarations and shall not be liable for any damages, dint places in the provided in the place of the provided in the place of the	to the best of tration of the poblatin a test old the packing accorporated's a y incorporated by raw mind raw materise estimates dion. The exclusiale. These are	Microchip Tec chemical subs report at g slip on the ou semiconducto d cannot guara naterial supplie al suppliers. Ir lo not include sive, limited pr p provided in M	chnology stance, if uter box and r devices in intee the ers. Supplier iformation is trace levels roduct licrochip's	1.01	Doped Silicon (mg) Total Copper Palladium	7440-21-3 Total Wire Bond Copper palladium coated (CuPd) 7440-50-8 7440-05-3 Total	100.00 100.00 % of Total Weight 98.25 1.75 100.00	1.65

CuPd 15:12:04/18/16