STATEMENT REGARDING EU-REACH
Integrated Circuit Products

Effective date: January 23, 2024

To our valued customers:

The European Union's REACH Directive[1] requires EU manufacturers and importers to determine if they must: 1) register certain substances with the European Chemicals Agency ("ECHA"), 2) notify ECHA regarding certain substances, or 3) communicate to customers that certain substances are present in the materials ("articles" and "preparations") they manufacture or import into the European Union.

Microchip's compliance efforts include monitoring REACH regulatory developments and an evaluation process for our products. Our product evaluation includes engineering analysis, third party testing, and other information or documents provided by the manufacturer or distributor of raw materials or by subcontract assemblers of Microchip's integrated circuit products. Because our evaluation includes reliance on third party information, we cannot verify to a certainty the accuracy of such third-party information. With that limitation in mind, we can provide the following information to our customers:

1. Registration with ECHA: When assessing REACH requirements for registration, EU manufacturers and EU importers are required to evaluate their articles to determine whether a prescribed exposure to chemicals exists. Registration of substances in articles is required where: a) substances are intended to be released from the produced or imported articles during normal and reasonably foreseeable conditions of use; and b) the total amount of substance present in the articles with intended releases produced and/or imported by that actor exceeds one (1) metric ton or more per year per producer or importer. As of the date above, there are no known or intended releases of chemical substances under normal or reasonably foreseeable conditions from the use of Microchip's electronic products. Therefore, Microchip is not subject to registration requirements under Articles 7(1) and 7(5) of REACH for its electronic products.

2. Notification with ECHA: Separate from the registration requirement above, the REACH Directive requires EU manufacturers and importers of certain substances to notify ECHA regarding each substance that is: a) a Substance of Very High Concern ("SVHC"),[2] present above a concentration threshold of 0.1% of the weight of the article; and b) imported in quantities of one (1) metric ton or more per year. Exemptions and other conditions can play into the analysis. Microchip does not

[1] Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
[2] Link to the published EU-REACH SVHC listing: http://echa.europa.eu/candidate-list-table

import more than one metric ton of any of the 240 SVHC into the European Union in any given year. Therefore, the notification requirements under Article 7(2) of REACH are not applicable to Microchip's electronic products.

3. Communication to Customers: REACH also imposes communication requirements on EU manufactures and importers to their customers regarding the existence of SVHC, if present above a concentration threshold of 0.1% of the weight of the preparation or article. As of the date above, none of the articles in Microchip's integrated circuit products have been found to have equal to or greater than 0.1% weight over weight of any of the 240 SVHCs, except for those identified within attachment "A". This letter is intended to be a proactive notification of the existence of REACH SVHCs and Microchip's ongoing efforts to substitute said materials.

4. Communication with respect to ANNEX 17: Annex XVII sets out a list of restrictions on the manufacture, placing on the market and use of certain dangerous chemical substances, mixtures and articles. The Annex contains restrictions on the marketing and use of dangerous substances adopted since 1976 in the framework of Directive 76/769/EEC, as well as subsequent restrictions adopted under REACH. These substances have specific restrictions and certain chemical restrictions in specific product(s). To the best of our current knowledge and belief, Microchip products have no restrictions and meet the requirements listed under Annex XVII as amended by Commission Regulation (EU) 2018/2005 of 17 December 2018, Entry 51.

Microchip commits to compliance with the REACH Directive and to communicate compliance to our customers as the scope and breadth of REACH regulation evolves. For information regarding the exclusive, limited warranties applicable to Microchip products, please see Microchip's standard terms and conditions of sale, which are printed on our sales documentation and available at www.microchip.com.

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Attachment "A"

Microchip does not specifically analyze (crush & grind) finished products for the presence of any SVHC. Information is believed to be accurate based upon review of material composition and information obtained directly from our various supply chains.

Modules BMxx / RN4xx / KLRxx / and System in Package (SIP) and XXBall Grid Arrays (xxBGA) packages may contain thick film resistors with [lead monoxide (1317-36-8)] and/or ceramic capacitors or inductors with [diboron trioxide (1303-86-2)] Di-boron trioxide.

REACH definition at § 7.1(b) requires registration of an article only if it contains a regulated substance that is intended to be released under normal or reasonably foreseeable conditions of use. In all cases, each of these substances identified above are chemically bound within the ceramic or glass matrix and presents no hazard to humans or the environment under normal handling and use.

Lead oxides (PbO, Pb_3O_4) noted as constituents of ceramics as such, the chemical characteristics, including risk to the environment and humans, of lead oxides (PbO, Pb_3O_4) as constituents of ceramics are not comparable with the properties of the final ceramics matrix. The chemical compound created is not a Substance of Very High Concern (SVHC). Manufacturers/importers are not obliged to communicate information on the substances mentioned above according to Article 33(1) and in accordance with Article 7(2) ff. of the REACH regulation.
Reference: Joint Position of BVKI, JEITA and ZVEI

Products listed below may contain bisphenol A (BPA) (CAS# 80-05-7) in varying amounts that may be above 0.1% w/w but less than 0.2% w/w, which is contained in the IC's laminated substrates. Under normal usage, no dispersion into the environment is expected and these components are not designed for usage while in contact with food or drink containers. Microchip believes these products constitute a non-registrable article(s) and are suitable for their intended and anticipated usage.

PM4351-NGI/PM4351-NI, PM5384-NGI/PM5384-NI, PM8375-NGI/PM8375-NI, PM8380-NGI ZL30182LFF7, ZL30182LFG7, ZL30244LFF7, ZL30244LFG7, ZL30245LFF7, ZL30245LFG7, ZL30255LFF7, ZL30255LFG7, ZL30621LFF7, ZL30621LFG7, ZL30623LFF7, ZL30623LFG7, ZL30721LFF7, ZL30721LFG7, ZL30723LFF7, ZL30723LFG7, M2GL050-FG896, M2S005-VF400, M2GL005-VF400, M2GL005-VFG400, M2S010-VF256, M2S005-VF256

Table below identifies IC package types which use EU-RoHS Exemptions and may contain a candidate listed Substances of Very High Concern (SVHC) within IC package currently available within the European Union (EU).

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
9KA	Transistor Outline	TO-263	3	-	Matte Tin	7(a)
9HA	Transistor Outline	TO-263	7	-	Matte Tin	7(a)
F9X	Ceramic Dual-In-Line-Pkg glass seal	CERDIP	8	.300in	SAC	7(c)-I
5NB	Ceramic Dual Inline Package	CERDIP	8	.600In	NiAu	7(c)-I
ZEX	System in Package	SiP	8	22x27x12mm	SAC	7(a), 7(c)-I
ZFX	System in Package	SiP	8	22x39.5x12.5mm	SAC	7(a), 7(c)-I
ZGX	System in Package	SiP	8	22x39x12.5mm	SAC	7(a), 7(c)-I
ESX	High-Power Dual Flatpack No-Lead	PDFN	8	3.3x3.3x0.9mm	Matte Tin	7(a)
ASX	High-Power Dual Flatpack No-Lead	PDFN	8	5x6x0.9mm	Matte Tin	7(a)
VDX	PBC Module with Shield	MODULE	12	17.78x27.94mm	Au Flash	7(c)-I
5PB	Ceramic Dual Inline Package	CERDIP	18	.300In	NiAu	7(c)-I
8ZB	Ceramic Dual Inline Package	CERDIP	18	22.19x26.08x2.75mm	NiAu	7(c)-I
8QB	Ceramic Dual Inline Package	CERDIP	24	.600In	NiAu	7(c)-I

[3] all the package codes using exemption 15 are no longer produced and are listed for historical reference only.

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
4YX	PCB Module	MODULE	25	12.7x11mm	Au	7(c)-I
5QB	Ceramic Dual Inline Package	CERDIP	28	.300In	NiAu	7(c)-I
5RB	Ceramic Dual Inline Package	CERDIP	28	.600In	NiAu	7(c)-I
5SB	Ceramic Dual Inline Package	CERDIP	32	.400In	NiAu	7(c)-I
DEB	Ceramic Quad Flatpack	CQFP	32	20.8x10.4x3mm	NiAu	7(a), 7(c)-I
9SB	Ceramic Dual Inline Package	CERDIP	32	40.64x10.03x2.84mm	NiAu	7(c)-I
5JB	Ceramic Dual Flat Pack	CDFP	36	12.19x23.37x2.97mm	NiAu	7(c)-I
5TB	Ceramic Dual Inline Package	CERDIP	40	.600In	NiAu	7(c)-I
W5X	J-Leaded Ceramic Chip Carrier	JLCC	68	.950x.950in	Au Flash	7(c)-I
W4X	J-Leaded CERQUAD 'Cerpac' glass seal	CERQUAD	68	.950x.950in	NiPdAu	7(c)-I
WPX	J-Lead CERQUAD WINDOWED	CERQUAD	68	.950x.950in	NiPdAu	7(c)-I
4EC	Flip Chip Ceramic Ball Grid Array	FCCBGA	69	10x10mm	SAC405	15(a)
4GC	Flip Chip Ceramic Ball Grid Array	FCCBGA	69	8x8mm	SAC405	15(a)
X5X	J-Leaded CERQUAD 'Cerpac' glass seal	CERQUAD	84	1.15x1.15in	NiPdAu	7(c)-I
XHX	J-Lead CERQUAD	CERQUAD	84	1.15x1.15in	NiPdAu	7(c)-I
2GC	Flip Chip Chip Scale Package	FCCSP	121	12x12mm	SAC305	15(a)

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
LXB	PCB Module	MODULE	188	40.8x40.8x3.3mm	NiAu	7(a), 7(c)-I
2SC	Flip Chip Chip Scale Package	FCCSP	196	15x15mm	SAC305	15(a)
4YC	Flip Chip Ball Grid Array	FCBGA	196	15x15mm	SAC305	15(a)
DFB	CERAMIC QUAD FLAT PACK	CQFP	256	36x36x4.03mm	NiAu	7(a), 7(c)-I
3JC	Heat Spreader Flip Chip BGA	HFCBGA	324	19x19mm	SAC305	15(a)
9QB	Ceramic Land Grid Array	CLGA	349	25x25x2.96mm	NiAu	7(a), 7(c)-I
WMB	Ceramic Land Grid Array	CLGA	349	25x25x2.96mm	NiAu	7(a), 7(c)-I
8WB	Ceramic Land Grid Array	CLGA	472	22x22x2.96mm	NiAu	7(a), 7(c)-I
8UB	Ceramic Land Grid Array	CLGA	472	29x29x1.27mm	NiAu	7(a), 7(c)-I
X3B	Ceramic Land Grid Array	CLGA	472	29X29X2.73mm	NiAu	7(a), 7(c)-I
X4B	Ceramic Land Grid Array	CLGA	472	29X29X2.77mm	NiAu	7(a), 7(c)-I
4DB	Ceramic Land Grid Array	CLGA	472	29x29x3.09mm	NiAu	7(a), 7(c)-I
5ZB	Ceramic Land Grid Array	CLGA	472	29x29x3.09mm	NiAu	7(a), 7(c)-I
8XB	Ceramic Land Grid Array	CLGA	472	29x29x3.09mm	NiAu	7(a), 7(c)-I
9RB	Ceramic Land Grid Array	CLGA	472	29x29x3.09mm	NiAu	7(a), 7(c)-I
X7B	Ceramic Land Grid Array	CLGA	472	29x29x4.03	NiAu	7(a), 7(c)-I

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
3RC	Heat Spreader Flip Chip BGA	HFCBGA	484	23x23mm	SAC305	15(a)
3WC	Heat Spreader Flip Chip BGA	HFCBGA	613	33x33mm	SAC305	15(a)
3XC	Heat Spreader Flip Chip BGA	HFCBGA	613	33x33mm	SAC305	15(a)
9LB	Ceramic Land Grid Array	CLGA	625	29x29x2.52mm	NiAu	7(a), 7(c)-I
5WB	Ceramic Land Grid Array	CLGA	625	29x29x2.96mm	NiAu	7(a), 7(c)-I
5XB	Ceramic Land Grid Array	CLGA	625	29x29x2.96mm	NiAu	7(a), 7(c)-I
5YB	Ceramic Land Grid Array	CLGA	625	29x29x2.96mm	NiAu	7(a), 7(c)-I
DDB	Ceramic Land Grid Array	CLGA	625	29x29x2.96mm	NiAu	7(a), 7(c)-I
4ZB	Ceramic Land Grid Array	CLGA	625	29x29x3.8mm	NiAu	7(a), 7(c)-I
8VB	Ceramic Land Grid Array	CLGA	625	29x29x3.8mm	NiAu	7(a), 7(c)-I
6AB	Ceramic Land Grid Array	CLGA	625	35x35x7.64mm	NiAu	7(a), 7(c)-I
ATC	Flip Chip Ball Grid Array	FCBGA	773	23x23mm	SAC305	15(a)
BTC	Flip Chip Ball Grid Array	FCBGA	773	23x23mm	SAC305	15(a)
BVC	Flip Chip Ball Grid Array	FCBGA	773	23x23mm	SAC305	15(a)
9WC	Heat Spreader Ball Grid Array	HBGA	896	31x31mm	SAC305	15(a)

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
AAC	Flip Chip Ball Grid Array	FCBGA	896	31x31mm	SAC305	15(a)
ASC	Flip Chip Ball Grid Array	FCBGA	896	31x31mm	SAC305	15(a)
BCC	Flip Chip Ball Grid Array	FCBGA	896	31x31mm	SAC305	15(a)
CDC	Flip Chip Ball Grid Array	FCBGA	896	31x31mm	SAC305	15(a)
D8B	Ceramic Land Grid Array	CLGA	896	31x31x3.8mm	NiAu	7(a), 7(c)-I
6DC	Flip Chip Ball Grid Array	FCBGA	1022	27x27mm	SAC305	15(a)
6FC	Thick Fine Pitch Ball Grid Array	BFBGA	1022	27x27mm	SAC305	7(c)-I
BHC	Flip Chip Ball Grid Array	FCBGA	1071	27x27mm	SAC305	15(a)
BGC	Fine Pitch Ball Grid Array	FBGA	1071	27x27x2.17mm	SAC305	15(a)
2DC	Heat Spreader Flip Chip BGA	HFCBGA	1072	45x45mm	SAC305	15(a)
BKC	Flip Chip Ball Grid Array	FCBGA	1073	27x27mm	SAC305	15(a)
BLC	Heat Spreader Thick Fine Pitch Ball Grid Array	HBFBGA	1408	31x31mm	SAC305	15(a)
BPC	Thick Ball Grid Array	BBGA	1517	40x40x3.22mm	SAC305	15(a)
6BB	Ceramic Land Grid Array	CLGA	1752	45x45x6mm	NiAu	7(a), 7(c)-I
6CB	Ceramic Land Grid Array	CLGA	1752	45x45x6mm	NiAu	7(a), 7(c)-I

Microchip Package Code	Package Description	Package Type	Pin Count	Package Width or Size	External Solder Composition (Terminal Finish)	EU RoHS Exemption[3]
9BB	Ceramic Land Grid Array	CLGA	1752	45x45x6mm	NiAu	7(a), 7(c)-I
2NC	Heat Spreader Flip Chip BGA	HFCBGA	1760	42.5x42.5mm	SAC305	7(c)-I
7KC	Thick Ball Grid Array	BBGA	1932	45x45mm	SAC305	7(c)-I
ADC	Ball Grid Array	BGA	592	27x27x2.24mm	SAC305	15(a)
JKC	Ball Grid Array	BGA	144	13x13x1.95mm	SAC305	7(c)-I
Not yet assigned	TO-264 and SOT-227	Lead (Pb)/ CAS No.: 7439-92-1 as main ingredient in high temperaturemelting solder as die attach and/or clip bonding. EU RoHS exemption clause 7(a): Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead). A chlorinated polycyclic compound as flame retardant and organochlorinepollutant. 1,6,7,8,9,14,15,16,17,17,18,18-dodecachloropentacyclo [12.2.1.16,9.02,13.05,10] octadeca-7,15-diene / CAS No.: 13560-89-9 used as an additive within a type of molding compound for encapsulation.				

MSCC FPGA-SoC Packages with Pb
Not yet integrated

Package Description	Package Type	Pin Count	External Solder Composition (Terminal Finish)
Plastic Ball Grid Array	BG	272 / 329 / 456	Sn63/Pb37
Fine Pitch Ball Grid Array	FG	144 / 256 / 324 / 484 / 676 / 896 / 1152	Sn63/Pb37
Very Fine Pitch Ball Grid Array	VF	256 / 400	Sn63/Pb37
Chip Scale Package	CS	49 / 81 / 121 / 128 / 180 / 196 / 201 / 281 / 288 / 289 / 325	Sn63/Pb37
Fine Pitch Chip Scale Package	FCS	158 / 325 / 536	Sn63/Pb37
Ultra-Thin Chip Scale Package	UC/UCS	36 / 81	Sn63/Pb37
Flip Chip Ball Grid Array	FC	484 / 784 / 1152 / 1657	Sn63/Pb37
Fine Pitch Flip Chip Ball Grid Array	FCV	484	Sn63/Pb37
Ceramic Quad Flat Pack	CQFP	84 / 172	Sn63/Pb37
Ceramic Pin Grid Array	CPGA	84 / 132 / 176 / 207 / 257	Sn63/Pb37
Ceramic Column Grid Array	CCGA	484 / 624 / 896 / 1152 / 1272 / 1657	Sn63/Pb37
Quad Flat Pack	QN	48 / 68 / **100** / **132** / **180**	85%Sn/15%Pb
Plastic Quad Flat Pack	PQ	100 / 144 / 160 / 208 / **240**	85%Sn/15%Pb
Thin Quad Flat Pack	TQ	64 / 100 / 144 / 176	85%Sn/15%Pb
Very Thin Quad Flat Pack	VQ	80 / 100 / 128 / 176	85%Sn/15%Pb
Plastic Leaded Chip Carrier	PL	44 / 68 / 84	85%Sn/15%Pb
Plastic Quad Flat Pack-Exposed Heatsink	RQ	**208** / **240**	85%Sn/15%Pb
Ceramic Quad Flat Pack	CQFP	84 / 132 / 172 / 196 / 208 / 256 / 352	NiAu
Ceramic Pin Grid Array	CPGA	84 / 132 / 176 / 207 / 257	NiAu
Ceramic Land Grid Array	CLGA	484 / 624 / 896 / 1152 / 1272 / 1657	NiAu
Ceramic Chip Carrier Land Grid Array	CCLG	256	NiAu
NOTE: ITEMS IN **BLUE** ARE DISCONTINUED			