Freescale Semiconductor Inc

PART INFORMATION	
Mfg Item Number	MPX2200A
Mfg Item Name	4 PIN UNIBODY

SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2013-06-19
Response Document ID	0718K50010S189A1.24
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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Representative Title	EPP Customer Response
Representative Phone	512-895-3406
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URL for Additional Information	www.freescale.com

DECLARATION	
EU RoHS	Yes
Pb Free	No
HalogenFree	No
Plating Indicator	e4
EU RoHS Exemption(s)	7c-I

MANUFACTURING	
Mfg Item Number	MPX2200A
Mfg Item Name	4 PIN UNIBODY
Version	ALL
Weight	1.607850
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	
Peak Processing Temperature	
Max Time at Peak Temperature	
Number of Processing Cycles	3

RoHS	
RoHS Directive	2011/65/EU
RoHS Definition	RoHS Definition: Quantity limit of 0.1% by mass (1000 PPM) of homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material of Cadmium
RoHS Legal Definition	Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2011/65/EU and implemented by the laws of the European Union member states) of the part(s) identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a RoHS restricted substance) in excess of the applicable quantity limit identified below. If a homogeneous material within the part(s) contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part(s), and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part(s),the terms and conditions of that agreement, including any warranty rights and/or remedies provided as part of that agreement, will be the sole and exclusive source of the Suppliers liability and the Companys remedies for issues that arise regarding information the Supplier provides in this form. In the absence of such written agreement, the warranty rights and/or remedies of Suppliers Standard Terms and Conditions of Sale applicable to such part(s) shall apply.
RoHS Declaration	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemptions in this part	7c-I:Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound
List of Freescale Accepted Exemptions	6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight 6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight 6(c) : Copper alloy containing up to 4% lead by weight 7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead) 7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications 7(c)-I : Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound 7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher 7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC 7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors 15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages

MATERIAL COMPOSITION

SubPart	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%		REACHPPM	REACH%
Cap/Cover	0.2853						g					
Cap/Cover		Metals	Chromium, metal	7440-47-3		0.048346	g	169458	16.9458		30068	3.0068
Cap/Cover		Solvents, additives, and other materials	Sulfur	7704-34-9		0.000085	g	299	0.0299		52	0.0052
Cap/Cover		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.000114	g	399	0.0399		70	0.007
Cap/Cover		Solvents, additives, and other materials	Silicon	7440-21-3		0.002133	g	7476	0.7476		1326	0.1326
Cap/Cover		Metals	Iron, metal	7439-89-6		0.231778	g	812400	81.24		144157	14.4157
Cap/Cover		Metals	Manganese, metal	7439-96-5		0.002844	g	9968	0.9968		1768	0.1768
Die Encapsulant	1.01905						g					
Die Encapsulant		Flame Retardants	Antimony trioxide	1309-64-4		0.024547	g	24088	2.4088		15266	1.5266
Die Encapsulant		Flame Retardants	Bromophenol, formaldehyde, epichlorohydrin polymer	68541-56-0		0.032729	g	32117	3.2117		20355	2.0355
Die Encapsulant		Plastics/polymers	Formaldehyde, polymer with 2-methylphenol, glycidyl ether	64425-89-4		0.163643	g	160584	16.0584		101779	10.1779
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.002813	g	2760	0.276		1749	0.1749
Die Encapsulant		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000013	g	13	0.0013		8	0.0008
Die Encapsulant		Solvents, additives, and other materials	(3,4-Epoxycyclohexyl)ethyltrimethoxysilane	3388-04-3		0.003682	g	3613	0.3613		2290	0.229
Die Encapsulant		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.09614	g	94343	9.4343		59795	5.9795
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.695483	g	682482	68.2482		432572	43.2572
Non-Conductive Epoxy/Adhesive	0.0082						g					
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Silicone gum	67762-94-1		0.000085	g	10324	1.0324		52	0.0052
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	68083-18-1		0.001008	g	122911	12.2911		626	0.0626
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.003225	g	393313	39.3313		2005	0.2005
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.001814	g	221239	22.1239		1128	0.1128
Non-Conductive Epoxy/Adhesive		Glass	D4 and HMDZ treated Silicon Dioxide	68937-51-9		0.001209	g	147493	14.7493		751	0.0751
Non-Conductive Epoxy/Adhesive		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.000766	g	93412	9.3412		476	0.0476
Non-Conductive Epoxy/Adhesive		Metals	Titanium (IV) Oxide	13463-67-7		0.000093	g	11308	1.1308		57	0.0057
Bonding Wire	0.0005						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0005	g	1000000	100		310	0.031
Gel Die Encapsulant	0.1136						g					
Gel Die Encapsulant		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.108036	g	951021	95.1021		67193	6.7193
Gel Die Encapsulant		Solvents, additives, and other materials	Dimethyl Cyclosiloxanes	70900-21-9		0.000348	g	3061	0.3061		216	0.0216
Gel Die Encapsulant		Solvents, additives, and other materials	Dimethyl Siloxane	69430-24-6		0.005216	g	45918	4.5918		3244	0.3244
Copper Lead Frame	0.1612						g					
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.156094	g	968328	96.8328		97084	9.7084
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.000016	g	100	0.01		9	0.0009
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.003492	g	21663	2.1663		2171	0.2171
Copper Lead Frame		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000003	g	16	0.0016		1	0.0001
Copper Lead Frame		Metals	Nickel, metal	7440-02-0		0.001344	g	8336	0.8336		835	0.0835
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.000068	g	424	0.0424		42	0.0042
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.000183	g	1133	0.1133		113	0.0113
Bonding Agent	0.0082						g					
Bonding Agent		Metals	Proprietary Material-Other aluminum compounds	-		0.00369	g	450000	45		2294	0.2294
Bonding Agent		Solvents, additives, and other materials	Other guanidine compounds	-		0.000205	g	25000	2.5		127	0.0127
Bonding Agent		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000205	g	25000	2.5		127	0.0127
Bonding Agent		Plastics/polymers	Other phenolic resins	-		0.0041	g	500000	50		2549	0.2549
Bonding Agent	0.0082						g					
Bonding Agent		Metals	Proprietary Material-Other aluminum compounds	-		0.00369	g	450000	45		2294	0.2294
Bonding Agent		Solvents, additives, and other materials	Other guanidine compounds	-		0.000205	g	25000	2.5		127	0.0127
Bonding Agent		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000205	g	25000	2.5		127	0.0127
Bonding Agent		Plastics/polymers	Other phenolic resins	-		0.0041	g	500000	50		2549	0.2549
Pb Glass Frit Semiconductor Di	0.0036				7c-I		g					
Pb Glass Frit Semiconductor Di		Metals	Lead titanium oxide (PbTiO3)	12060-00-3		0.000037	g	10381	1.0381		23	0.0023
Pb Glass Frit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.000036	g	9943	0.9943		22	0.0022
Pb Glass Frit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monoisobutyrate	25265-77-4		0.000036	g	9943	0.9943		22	0.0022
Pb Glass Frit Semiconductor Di		Glass	Silicon, doped	-		0.003491	g	969733	96.9733		2171	0.2171

LINKS	
MCD LINK	
Freescale website	http://www.freescale.com
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescale_Response.pdf
China RoHS	http://www.freescale.com/chinarohs
REACH signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescale_Response.pdf
ELV signed letter	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescale_Reponse.pdf
Conflict Minerals statement	http://www.freescale.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescale_Response.pdf
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	http://www.freescale.com/epp
FAQ	http://www.freescale.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ
Technical Service Request	https://www.freescale.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&defaultTopic=Environmentally Preferred Prod
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v0.9 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf
Blank IPC1752 v1.1 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf

IPC1752 XML LINKS

http://www.freescale.com/mcds/MPX2200A_IPC1752_v09.xml

http://www.freescale.com/mcds/MPX2200A_IPC1752_v11.xml

http://www.freescale.com/mcds/MPX2200A_IPC1752A.xml