

PART INFORMATION		
Mfg Item Number		MPX2102ASX
Mfg Item Name		4 PIN UNIBODY AXIAL PORT
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2013-06-19
Response Document ID		0876K50010S236A1.24
Contact Name		Freescale Semiconductor Inc
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Representative Title		EPP Customer Response
Representative Phone		512-895-3406
Representative Email		eppanlst@freescale.com
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		MPX2102ASX
Mfg Item Name		4 PIN UNIBODY AXIAL PORT
Version		ALL
Weight		3.267700
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%
Die Encapsulant	0.9593						g					
Die Encapsulant		Flame Retardants	Antimony trioxide	1309-64-4		0.023108	g	24088	2.4088		7071	0.7071
Die Encapsulant		Flame Retardants	Bromophenol, formaldehyde, epichlorohydrin polymer	68541-56-0		0.03081	g	32117	3.2117		9428	0.9428
Die Encapsulant		Plastics/polymers	Formaldehyde, polymer with 2-methylphenol, glycidyl ether	64425-89-4		0.154048	g	160584	16.0584		47142	4.7142
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.002648	g	2760	0.276		810	0.81
Die Encapsulant		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000912	g	13	0.0013		3	0.0003
Die Encapsulant		Solvents, additives, and other materials	(3,4-Epoxy)cyclohexylethytrimethoxysilane	3388-04-3		0.003466	g	3613	0.3613		1060	0.106
Die Encapsulant		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.099503	g	94343	9.4343		27696	2.7696
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.654705	g	682482	68.2482		200360	20.036
Non-Conductive Epoxy/Adhesive	0.0086						g					
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Silicone gum	67762-94-1		0.000989	g	10324	1.0324		27	0.0027
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and Silicones, di-Me, Me vinyl, vinyl group-terminated	68083-18-1		0.001067	g	122911	12.2911		323	0.0323
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.003383	g	393313	39.3313		1035	0.1035
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.001903	g	221239	22.1239		582	0.0582
Non-Conductive Epoxy/Adhesive		Glass	D4 and HMDZ treated Silicon Dioxide	68937-51-9		0.001268	g	147493	14.7493		388	0.0388
Non-Conductive Epoxy/Adhesive		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.000803	g	83412	8.3412		245	0.0245
Non-Conductive Epoxy/Adhesive		Metals	Titanium (IV) Oxide	13463-67-7		0.000097	g	11308	1.1308		29	0.0029
Port	1.9575						g					
Port		Metals	Antimony, metal	7440-36-0		0.058725	g	30000	3		17971	1.7971
Port		Flame Retardants	Antimony trioxide	1309-64-4		0.058725	g	30000	3		17971	1.7971
Port		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.010766	g	5500	0.55		3294	0.3294
Port		Plastics/polymers	Polybutylene terephthalate (PBT)	30965-26-5		1.437784	g	734500	73.45		440011	44.0011
Port		Glass	Fibrous-glass-wool	65997-17-3		0.3915	g	200000	20		119811	11.9811
Bonding Wire	0.0007						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0007	g	1000000	100		214	0.0214
Gel Die Encapsulant	0.1138						g					
Gel Die Encapsulant		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.108227	g	951021	95.1021		33120	3.312
Gel Die Encapsulant		Solvents, additives, and other materials	Dimethyl Cyclosiloxanes	70900-21-9		0.000348	g	3061	0.3061		106	0.0106
Gel Die Encapsulant		Solvents, additives, and other materials	Dimethyl Siloxane	69430-24-6		0.005225	g	45918	4.5918		1598	0.1598
Copper Lead Frame	0.2147						g					
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.207901	g	968328	96.8328		63624	6.3624
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.000021	g	100	0.01		6	0.0006
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.004651	g	21663	2.1663		1423	0.1423
Copper Lead Frame		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000003	g	16	0.0016		0	0
Copper Lead Frame		Metals	Nickel, metal	7440-02-0		0.00179	g	8336	0.8336		547	0.0547
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.000091	g	424	0.0424		27	0.0027
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.000243	g	1133	0.1133		74	0.0074
Bonding Agent	0.0086						g					
Bonding Agent		Metals	Proprietary Material-Other aluminum compounds	-		0.00387	g	450000	45		1184	0.1184
Bonding Agent		Solvents, additives, and other materials	Other guanidine compounds	-		0.000215	g	25000	2.5		65	0.0065
Bonding Agent		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000215	g	25000	2.5		65	0.0065
Bonding Agent		Plastics/polymers	Other phenolic resins	-		0.0043	g	500000	50		1315	0.1315
Pb Glass Frit Semiconductor Di	0.0045				7c-1		g					
Pb Glass Frit Semiconductor Di		Metals	Lead titanium oxide (PbTiO3)	12060-00-3		0.000047	g	10381	1.0381		14	0.0014
Pb Glass Frit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.000045	g	9943	0.9943		13	0.0013
Pb Glass Frit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monooisobutyrate	25265-77-4		0.000045	g	9943	0.9943		13	0.0013
Pb Glass Frit Semiconductor Di		Glass	Silicon, doped	-		0.004363	g	969733	96.9733		1335	0.1335

LINKS	
MCD LINK	
Freescal website	<a href="http://www.freescal.com">http://www.freescal.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescal_Response.pdf</a>
China RoHS	<a href="http://www.freescal.com/chinarohs">http://www.freescal.com/chinarohs</a>
REACH signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescal_Response.pdf</a>
ELV signed letter	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescal_Reponse.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescal_Reponse.pdf</a>
Conflict Minerals statement	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescal_Response.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescal_Response.pdf</a>
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	<a href="http://www.freescal.com/epp">http://www.freescal.com/epp</a>
FAQ	<a href="http://www.freescal.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ">http://www.freescal.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ</a>
Technical Service Request	<a href="https://www.freescal.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&amp;defaultTopic=Environmentally Preferred Prod">https://www.freescal.com/webapp/servicerequest.create_SR.framework?defaultCategory=Hardware Product Support&amp;defaultTopic=Environmentally Preferred Prod</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v0.9 Form	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf</a>
Blank IPC1752 v1.1 Form	<a href="http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcds/MPX2102ASX\\_IPC1752\\_v09.xml](http://www.freescale.com/mcds/MPX2102ASX_IPC1752_v09.xml)

[http://www.freescale.com/mcds/MPX2102ASX\\_IPC1752\\_v11.xml](http://www.freescale.com/mcds/MPX2102ASX_IPC1752_v11.xml)

[http://www.freescale.com/mcds/MPX2102ASX\\_IPC1752A.xml](http://www.freescale.com/mcds/MPX2102ASX_IPC1752A.xml)