Freescale Semiconductor Inc

PART INFORMATION	
Mfg Item Number	P3041NXN1PNB
Mfg Item Name	FCPBGA 1295 37.5SQ3.55P1

SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2015-04-10
Response Document ID	8404K50008S269A1.12
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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Authorized Representative	Daniel Binyon
Representative Title	EPP Customer Response
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Representative Email	eppanlst@freescale.com
URL for Additional Information	www.freescale.com

DECLARATION	
EU RoHS	Yes
Pb Free	No
HalogenFree	Yes
Plating Indicator	e1
EU RoHS Exemption(s)	15

MANUFACTURING	
Mfg Item Number	P3041NXN1PNB
Mfg Item Name	FCPBGA 1295 37.5SQ3.55P1
Version	ALL
Weight	13.971000
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	245 C
Max Time at Peak Temperature	30 seconds
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
Exemption List Version	2012/51/EU
Exemptions in this part	15:Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages
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

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%		ARTICLEPPM	ARTICLE%
Bonding Agent	0.0115						g					
Bonding Agent		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.005175	g	450000	45		370	0.037
Bonding Agent		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.0046	g	400000	40		329	0.0329
Bonding Agent		Solvents, additives, and other materials	Dimethylvinylated and trimethylated silica	68988-89-6		0.001725	g	150000	15		123	0.0123
Underfill	0.0657						g					
Underfill		Bismuth/Bismuth Compounds	Bismuth nitrate	10361-44-1		0.00029197	g	4444	0.4444		20	0.002
Underfill		Bismuth/Bismuth Compounds	Bismuth trioxide	1304-76-3		0.00029197	g	4444	0.4444		20	0.002
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00729999	g	111111	11.1111		522	0.0522
Underfill		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00072999	g	11111	1.1111		52	0.0052
Underfill		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.00291997	g	44444	4.4444		209	0.0209
Underfill		Glass	Silica, vitreous	60676-86-0		0.04745013	g	722224	72.2224		3396	0.3396
Underfill		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.00160597	g	24444	2.4444		114	0.0114
Underfill		Solvents, additives, and other materials	Proprietary Material-Other aliphatic amine compounds	-		0.00511001	g	77778	7.7778		365	0.0365
Heat Spreader	7.532						g					
Heat Spreader		Metals	Copper, metal	7440-50-8		7.50778462	g	996785	99.6785		537398	53.7398
Heat Spreader		Nickel (external applications only)	Nickel	7440-02-0		0.02421538	g	3215	0.3215		1733	0.1733
Die Encapsulant, Filler	1.8864						g					
Die Encapsulant, Filler		Metals	Aluminum, metal	7429-90-5		1.358208	g	720000	72		97216	9.7216
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.169776	g	90000	9		12152	1.2152
Die Encapsulant, Filler		Metals	Zinc oxide	1314-13-2		0.339552	g	180000	18		24304	2.4304
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.018864	g	10000	1		1350	0.135
Solder Balls - Lead Free	1.2821						g					
Solder Balls - Lead Free		Metals	Copper, metal	7440-50-8		0.00642204	g	5009	0.5009		459	0.0459
Solder Balls - Lead Free		Metals	Silver, metal	7440-22-4		0.03853223	g	30054	3.0054		2758	0.2758
Solder Balls - Lead Free		Metals	Tin, metal	7440-31-5		1.23714573	g	964937	96.4937		88550	8.855
Organic Substrate	2.8001						g					
Organic Substrate		Solvents, additives, and other materials	Proprietary Material-Other acrylonitrile compounds	-		0.24375431	g	87052	8.7052		17447	1.7447
Organic Substrate		Arsenic/Arsenic Compounds	Arsenic	7440-38-2		0.000028	g	10	0.001		2	0.0002
Organic Substrate		Metals	Barium sulfate	7727-43-7		0.18810232	g	67177	6.7177		13463	1.3463
Organic Substrate		Metals	Copper, metal	7440-50-8		1.3355413	g	476962	47.6962		95593	9.5593
Organic Substrate		Lead/Lead Compounds	Lead	7439-92-1		0.00237448	g	848	0.0848		169	0.0169
Organic Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.83466781	g	298085	29.8085		59742	5.9742
Organic Substrate		Glass	Silicon dioxide	7631-86-9		0.08632708	g	30830	3.083		6179	0.6179
Organic Substrate		Metals	Silver, metal	7440-22-4		0.00064962	g	232	0.0232		46	0.0046
Organic Substrate		Metals	Tin, metal	7440-31-5		0.10865508	g	38804	3.8804		7777	0.7777
High Pb Bumped Semiconductor D	0.3932				15		g					
High Pb Bumped Semiconductor D		Lead/Lead Compounds	Lead	7439-92-1		0.0370304	g	94177	9.4177		2650	0.265
High Pb Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.00032439	g	825	0.0825		23	0.0023
High Pb Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.0019487	g	4956	0.4956		139	0.0139
High Pb Bumped Semiconductor D		Metals	Titanium, metal	7440-32-6		0.00001651	g	42	0.0042		1	0.0001
High Pb Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.0035388	g	9000	0.9		253	0.0253
High Pb Bumped Semiconductor D		Glass	Silicon, doped	-		0.3503412	g	891000	89.1		25076	2.5076

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 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/P3041NXN1PNB_IPC1752_v11.xml

http://www.freescale.com/mcds/P3041NXN1PNB_IPC1752A.xml