

PART INFORMATION		
Mfg Item Number		P5020NSN7MMB
Mfg Item Name		FCPBGA 1295 37.5SQ3.55P1
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2013-08-07
Response Document ID		8404K50008S292M1.0
Contact Name		Freescale Semiconductor Inc
Contact Title		Product Technical Support
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Authorized Representative		Daniel Binyon
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		Yes
HalogenFree		Yes
Plating Indicator		e1
EU RoHS Exemption(s)		
MANUFACTURING		
Mfg Item Number		P5020NSN7MMB
Mfg Item Name		FCPBGA 1295 37.5SQ3.55P1
Version		ALL
Weight		13.973900
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	1 - Item(s) do not contain RoHS restricted substances per the definition above
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemptions in this part	
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%
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
Heat Spreader	7.532						g					
Heat Spreader		Metals	Copper, metal	7440-50-8		7.507785	g	996785	99.6785		537288	53.7288
Heat Spreader		Metals	Nickel, metal	7440-02-0		0.024215	g	3215	0.3215		1732	0.1732
Die Encapsulant, Filler	1.8864						g					
Die Encapsulant, Filler		Metals	Aluminum, metal	7429-90-5		1.358208	g	720000	72		97197	9.7197
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.169776	g	90000	9		12149	1.2149
Die Encapsulant, Filler		Metals	Zinc oxide	1314-13-2		0.339552	g	180000	18		24299	2.4299
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.018864	g	10000	1		1349	0.1349
Solder Balls - Lead Free	1.2821						g					
Solder Balls - Lead Free		Metals	Copper, metal	7440-50-8		0.006422	g	5009	0.5009		459	0.0459
Solder Balls - Lead Free		Metals	Silver, metal	7440-22-4		0.038532	g	30054	3.0054		2757	0.2757
Solder Balls - Lead Free		Metals	Tin, metal	7440-31-5		1.237146	g	964937	96.4937		88533	8.8533
Underfill	0.0657						g					
Underfill		Metals	Bismuth nitrate	10361-44-1		0.000329	g	5000	0.5		23	0.0023
Underfill		Metals	Bismuth trioxide	1304-76-3		0.000329	g	5000	0.5		23	0.0023
Underfill		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-48-6		0.009855	g	150000	15		705	0.0705
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00657	g	100000	10		470	0.047
Underfill		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000329	g	5000	0.5		23	0.0023
Underfill		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.001971	g	30000	3		141	0.0141
Underfill		Glass	Silica, vitreous	60676-86-0		0.039418	g	600000	60		2820	0.282
Underfill		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.000329	g	5000	0.5		23	0.0023
Underfill		Solvents, additives, and other materials	Proprietary Material-Other aliphatic amine compounds	-		0.00657	g	100000	10		470	0.047
Organic Substrate, Halogen-free	2.803						g					
Organic Substrate, Halogen-free		Metals	Arsenic, metal	7440-39-2		0.000031	g	11	0.0011		2	0.0002
Organic Substrate, Halogen-free		Metals	Barium sulfate	7727-43-7		0.016142	g	5759	0.5759		1155	0.1155
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		1.332239	g	475291	47.5291		95338	9.5338
Organic Substrate, Halogen-free		Plastics/polymers	2,2'-(1-methylethylene)bis(4,1-phenyleneoxymethylene)bisoxirane	1675-54-3		0.003319	g	1184	0.1184		237	0.0237
Organic Substrate, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.249414	g	88981	8.8981		17848	1.7848
Organic Substrate, Halogen-free		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.000014	g	5	0.0005		1	0.0001
Organic Substrate, Halogen-free		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.055284	g	19723	1.9723		3956	0.3956
Organic Substrate, Halogen-free		Glass	Fibrous-glass-wool	65997-17-3		0.594194	g	211985	21.1985		42521	4.2521
Organic Substrate, Halogen-free		Glass	Silicon dioxide	7631-86-9		0.213911	g	76315	7.6315		15307	1.5307
Organic Substrate, Halogen-free		Metals	Silver, metal	7440-22-4		0.000861	g	307	0.0307		61	0.0061
Organic Substrate, Halogen-free		Metals	Tin, metal	7440-31-5		0.027668	g	9871	0.9871		1979	0.1979
Organic Substrate, Halogen-free		Metals	Aluminum Hydroxide	21645-61-2		0.307341	g	109647	10.9647		21993	2.1993
Organic Substrate, Halogen-free		Metals	Copper phthalocyanine	147-14-8		0.002582	g	921	0.0921		184	0.0184
Pb-free Bumped Semiconductor D	0.3932						g					
Pb-free Bumped Semiconductor D		Metals	Nickel, metal	7440-02-0		0.001966	g	5000	0.5		140	0.014
Pb-free Bumped Semiconductor D		Metals	Silver, metal	7440-22-4		0.001239	g	3150	0.315		88	0.0088
Pb-free Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.034149	g	86850	8.685		2443	0.2443
Pb-free Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.003539	g	9000	0.9		253	0.0253
Pb-free Bumped Semiconductor D		Glass	Silicon, doped	-		0.352307	g	896000	89.6		25211	2.5211



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/P5020NSN7MMB\\_IPC1752\\_v09.xml](http://www.freescale.com/mcds/P5020NSN7MMB_IPC1752_v09.xml)

[http://www.freescale.com/mcds/P5020NSN7MMB\\_IPC1752\\_v11.xml](http://www.freescale.com/mcds/P5020NSN7MMB_IPC1752_v11.xml)

[http://www.freescale.com/mcds/P5020NSN7MMB\\_IPC1752A.xml](http://www.freescale.com/mcds/P5020NSN7MMB_IPC1752A.xml)