

PART INFORMATION		
Mfg Item Number		P2041NSE1MMB
Mfg Item Name		FCPBGA 780 23*23 P0.8
SUPPLIER		
Company Name		Freescale Semiconductor Inc
Company Unique ID		14-141-7928
Response Date		2015-06-03
Response Document ID		008NK50008S270A1.9
Contact Name		Freescale Semiconductor Inc
Contact Title		Product Technical Support
Contact Phone		1-800-521-6274
Contact Email		support@freescale.com
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		No
HalogenFree		Yes
Plating Indicator		e1
EU RoHS Exemption(s)		15
MANUFACTURING		
Mfg Item Number		P2041NSE1MMB
Mfg Item Name		FCPBGA 780 23*23 P0.8
Version		ALL
Weight		5.503800
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	0.07						g					
Bonding Agent		Solvents, additives, and other materials	Siloxanes and silicones, di-Me, vinyl group-terminated	68083-19-2		0.0315	g	450000	45		5723	0.5723
Bonding Agent		Glass	Silica, crystalline - quartz (SiO2)	14808-60-7		0.028	g	400000	40		5087	0.5087
Bonding Agent		Solvents, additives, and other materials	Dimethylvinylated and trimethylated silica	68988-89-6		0.0105	g	150000	15		1907	0.1907
Solder Balls - Lead Free	0.1233						g					
Solder Balls - Lead Free		Metals	Copper, metal	7440-50-8		0.00061761	g	5009	0.5009		112	0.0112
Solder Balls - Lead Free		Metals	Silver, metal	7440-22-4		0.00370566	g	30054	3.0054		673	0.0673
Solder Balls - Lead Free		Metals	Tin, metal	7440-31-5		0.11897673	g	964937	96.4937		21617	2.1617
Underfill	0.0268						g					
Underfill		Bismuth/Bismuth Compounds	Bismuth nitrate	10361-44-1		0.0001191	g	4444	0.4444		21	0.0021
Underfill		Bismuth/Bismuth Compounds	Bismuth trioxide	1304-76-3		0.0001191	g	4444	0.4444		21	0.0021
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00297777	g	111111	11.1111		541	0.0541
Underfill		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00029777	g	11111	1.1111		54	0.0054
Underfill		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.0011911	g	44444	4.4444		216	0.0216
Underfill		Glass	Silica, vitreous	60676-86-0		0.01936561	g	722224	72.2224		3516	0.3516
Underfill		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.0008551	g	24444	2.4444		119	0.0119
Underfill		Solvents, additives, and other materials	Proprietary Material-Other aliphatic amine compounds	-		0.00208445	g	77778	7.7778		378	0.0378
Heat Spreader	2.8298						g					
Heat Spreader		Metals	Copper, metal	7440-50-8		2.78289132	g	984467	98.4467		505645	50.5645
Heat Spreader		Nickel (external applications only)	Nickel	7440-02-0		0.04390868	g	15523	1.5523		7977	0.7977
Die Encapsulant, Filler	1.1226						g					
Die Encapsulant, Filler		Metals	Aluminum, metal	7429-90-5		0.808272	g	720000	72		148857	14.8857
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other siloxanes and silicones	-		0.101094	g	90000	9		18357	1.8357
Die Encapsulant, Filler		Metals	Zinc oxide	1314-13-2		0.202068	g	180000	18		36714	3.6714
Die Encapsulant, Filler		Solvents, additives, and other materials	Proprietary Material-Other miscellaneous substances.	-		0.011226	g	10000	1		2039	0.2039
Organic Substrate	1.1226				15		g					
Organic Substrate		Solvents, additives, and other materials	Proprietary Material-Other acrylonitrile compounds	-		0.10276842	g	91545	9.1545		18672	1.8672
Organic Substrate		Arsenic/Arsenic Compounds	Arsenic	7440-39-2		0.00001123	g	10	0.001		2	0.0002
Organic Substrate		Metals	Barium sulfate	7727-43-7		0.08504369	g	75756	7.5756		15451	1.5451
Organic Substrate		Metals	Copper, metal	7440-50-8		0.51868385	g	462038	46.2038		94241	9.4241
Organic Substrate		Lead/Lead Compounds	Lead	7439-92-1		0.00256065	g	2281	0.2281		465	0.0465
Organic Substrate		Glass	Fibrous-glass-wool	65997-17-3		0.30528321	g	271943	27.1943		55467	5.5467
Organic Substrate		Glass	Silicon dioxide	7631-86-9		0.054143	g	48230	4.823		9837	0.9837
Organic Substrate		Metals	Silver, metal	7440-22-4		0.00034913	g	311	0.0311		63	0.0063
Organic Substrate		Metals	Tin, metal	7440-31-5		0.05375682	g	47886	4.7886		9767	0.9767
High Pb Bumped Semiconductor D	0.2117				15		g					
High Pb Bumped Semiconductor D		Lead/Lead Compounds	Lead	7439-92-1		0.01983727	g	94177	9.4177		3622	0.3622
High Pb Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.00017465	g	825	0.0825		31	0.0031
High Pb Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.00104919	g	4956	0.4956		190	0.019
High Pb Bumped Semiconductor D		Metals	Titanium, metal	7440-32-6		0.00000889	g	42	0.0042		1	0.0001
High Pb Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.0019053	g	9000	0.9		346	0.0346
High Pb Bumped Semiconductor D		Glass	Silicon, doped	-		0.1886247	g	891000	89.1		34271	3.4271

LINKS	
MCD LINK	
Freescal website	http://www.freescal.com
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ROHS_Freescal_Response.pdf
China RoHS	http://www.freescal.com/chinarohs
REACH signed letter	http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_REACH_Freescal_Response.pdf
ELV signed letter	http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_ELV_Freescal_Reponse.pdf
Conflict Minerals statement	http://www.freescal.com/files/abstract/corporate/ehs_epp/ENV_CONFLICT_METAL_Freescal_Response.pdf
FREESCALE ENVIRONMENTAL INFORMATION	
EPP website	http://www.freescal.com/epp
FAQ	http://www.freescal.com/webapp/sps/site/overview.jsp?code=ENVIRON_FAQ
Technical Service Request	https://www.freescal.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.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf

IPC1752 XML LINKS

http://www.freescale.com/mcds/P2041NSE1MMB_IPC1752_v11.xml

http://www.freescale.com/mcds/P2041NSE1MMB_IPC1752A.xml