PART INFORMATION

Mfg Item Number	MC33888FB
Mfg Item Name	QFP 64 14*14*2.7P0.65

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2014-11-18
Response Document ID	8427A1.7
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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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)	7a

MANUFACTURING

Mfg Item Number	MC33888FB
Mfg Item Name	QFP 64 14*14*2.7P0.65
Version	ALL
Weight	1.925250
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	225 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	7a:Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)
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%
Copper Lead Frame	1.061						g					
Copper Lead Frame		Metals	Copper, metal	7440-50-8		1.04348078	g	983488	98.3488		542011	54.2011
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.00033103	g	312	0.0312		171	0.0171
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.00032254	g	304	0.0304		167	0.0167
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.00920205	g	8673	0.8673		4779	0.4779
Copper Lead Frame		Lead/Lead Compounds	Lead	7439-92-1		0.00007321	g	69	0.0069		38	0.0038
Copper Lead Frame		Nickel (external applications only)	Nickel	7440-02-0		0.00605088	g	5703	0.5703		3142	0.3142
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.00035225	g	332	0.0332		182	0.0182
Copper Lead Frame		Metals	Silver, metal	7440-22-4		0.00069814	g	658	0.0658		362	0.0362
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.00048912	g	461	0.0461		254	0.0254
Die Encapsulant	0.78905						g					
Die Encapsulant		Antimony/Antimony Compounds	Antimony trioxide	1309-64-4		0.01215137	g	15400	1.54		6311	0.6311
Die Encapsulant		Flame Retardants	Other brominated flame retardants	-		0.02025255	g	25667	2.5667		10519	1.0519
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.06075843	g	77002	7.7002		31558	3.1558
Die Encapsulant		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.00324063	g	4107	0.4107		1683	0.1683
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.04455608	g	56468	5.6468		23143	2.3143
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.64809094	g	821356	82.1356		336626	33.6626
Bonding Wire	0.0006						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0006	g	1000000	100		311	0.0311
Bonding Wire, Aluminum	0.0078						g					
Bonding Wire, Aluminum		Metals	Aluminum, metal	7429-90-5		0.0078	g	1000000	100		4051	0.4051
Silicon Semiconductor Die	0.02475						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000495	g	20000	2		257	0.0257
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.024255	g	980000	98		12598	1.2598
Silicon Semiconductor Die	0.02475						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.000495	g	20000	2		257	0.0257
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.024255	g	980000	98		12598	1.2598
Solder Die Attach	0.0045				7a		g					
Solder Die Attach		Cadmium/Cadmium Compounds	Cadmium	7440-43-9		0	g	1	0.0001		0	0
Solder Die Attach		Metals	Chromium(VI)	18540-29-9		0	g	1	0.0001		0	0
Solder Die Attach		Lead/Lead Compounds	Lead	7439-92-1		0.0042975	g	954997	95.4997		2232	0.2232
Solder Die Attach		Mercury/Mercury Compounds	Mercury	7439-97-6		0	g	1	0.0001		0	0
Solder Die Attach		Metals	Silver, metal	7440-22-4		0.0001125	g	25000	2.5		58	0.0058
Solder Die Attach		Metals	Tin, metal	7440-31-5		0.00009	g	20000	2		46	0.0046
Epoxy Die Attach	0.0128						g					
Epoxy Die Attach		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00179791	g	140462	14.0462		933	0.0933
Epoxy Die Attach		Solvents, additives, and other materials	1-cyanoguanidine	461-58-5		0.00004315	g	3371	0.3371		22	0.0022
Epoxy Die Attach		Plastics/polymers	4,4'-Dihydroxydiphenyl	92-88-6		0.00014383	g	11237	1.1237		74	0.0074
Epoxy Die Attach		Metals	Silver, metal	7440-22-4		0.01081511	g	844930	84.493		5617	0.5617

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/MC33888FB_IPC1752_v11.xml

http://www.freescale.com/mcds/MC33888FB_IPC1752A.xml