Freescale Semiconductor Inc

PART INFORMATION	
Mfg Item Number	MCF5282CVF80J
Mfg Item Name	MAPBGA 256 17*17*0.8P1.0

SUPPLIER	
Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2012-07-26
Response Document ID	5246K00022D041A1.10
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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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	No
Pb Free	No
HalogenFree	Yes
Plating Indicator	e0
EU RoHS Exemption(s)	

MANUFACTURING	
Mfg Item Number	MCF5282CVF80J
Mfg Item Name	MAPBGA 256 17*17*0.8P1.0
Version	ALL
Weight	0.804000
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
Peak Processing Temperature	220 C
Max Time at Peak Temperature	30 seconds
Number of Processing Cycles	3

RoHS	
RoHS Directive	2002/95/EC
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 2002/95/EC 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	2 - Item(s) contain RoHS restricted substances above the limits and is not under exemptions
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%
Die Encapsulant	0.342						g					
Die Encapsulant		Metals	Aluminum, metal	7429-90-5		0.010566	g	30896	3.0896		13141	1.3141
Die Encapsulant		Metals	Arsenic, metal	7440-38-2		0	g	1	0.0001		0	0
Die Encapsulant		Metals	Cadmium, metal	7440-43-9		0	g	1	0.0001		0	0
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.010566	g	30896	3.0896		13141	1.3141
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.001057	g	3090	0.309		1314	0.1314
Die Encapsulant		Metals	Lead, metallic lead and lead alloys	7439-92-1		0	g	1	0.0001		0	0
Die Encapsulant		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.001057	g	3090	0.309		1314	0.1314
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.019372	g	56642	5.6642		24094	2.4094
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.299382	g	875383	87.5383		372377	37.2377
Organic Substrate, Halogen-fre	0.2073						g					
Organic Substrate, Halogen-fre		Metals	Barium sulfate	7727-43-7		0.010543	g	50860	5.086		13113	1.3113
Organic Substrate, Halogen-fre		Metals	Copper, metal	7440-50-8		0.066059	g	318661	31.8661		82163	8.2163
Organic Substrate, Halogen-fre		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.013973	g	67405	6.7405		17379	1.7379
Organic Substrate, Halogen-fre		Metals	Gold, metal	7440-57-5		0.002951	g	14236	1.4236		3670	0.367
Organic Substrate, Halogen-fre		Metals	Nickel, metal	7440-02-0		0.026614	g	128383	12.8383		33101	3.3101
Organic Substrate, Halogen-fre		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.03647	g	175931	17.5931		45360	4.536
Organic Substrate, Halogen-fre		Solvents, additives, and other materials	Proprietary Material-Other Aromatic carbonyl compounds	-		0.001652	g	7969	0.7969		2054	0.2054
Organic Substrate, Halogen-fre		Glass	Silica, crystalline - tridymite	15468-32-3		0.049038	g	236555	23.6555		60992	6.0992
Solder Balls - Low Lead	0.1491						g					
Solder Balls - Low Lead		Metals	Lead, metallic lead and lead alloys	7439-92-1		0.053676	g	360000	36		66762	6.6762
Solder Balls - Low Lead		Metals	Silver, metal	7440-22-4		0.002982	g	20000	2		3708	0.3708
Solder Balls - Low Lead		Metals	Tin, metal	7440-31-5		0.092442	g	620000	62		114978	11.4978
Non-Conductive Epoxy/Adhesive	0.0105						g					
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.000788	g	75000	7.5		980	0.098
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Crosslinked acrylate polymer	25767-43-5		0.0021	g	200000	20		2611	0.2611
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Other polymers	-		0.000788	g	75000	7.5		980	0.098
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other polymers	-		0.0021	g	200000	20		2611	0.2611
Non-Conductive Epoxy/Adhesive		Glass	Silica, vitreous	60676-86-0		0.004724	g	450000	45		5875	0.5875
Bonding Wire	0.0018						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0018	g	1000000	100		2238	0.2238
Silicon Semiconductor Die	0.0933						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%).	-		0.001866	g	20000	2		2320	0.232
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.091434	g	980000	98		113724	11.3724

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 v0.9 Form	http://www.freescale.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf
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/MCF5282CVF80J_IPC1752_v09.xml

http://www.freescale.com/mcds/MCF5282CVF80J_IPC1752_v11.xml

http://www.freescale.com/mcds/MCF5282CVF80J_IPC1752A.xml