

PART INFORMATION		
Mfg Item Number	MMA7660FCR1	
Mfg Item Name	DFN 10 COL 3*3*0.9P0.5	
SUPPLIER		
Company Name	Freescale Semiconductor Inc	
Company Unique ID	14-141-7928	
Response Date	2013-03-24	
Response Document ID	6241K11243D009A1.14	
Contact Name	Freescale Semiconductor Inc	
Contact Title	Product Technical Support	
Contact Phone	1-800-521-6274	
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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	No	
HalogenFree	Yes	
Plating Indicator	e4	
EU RoHS Exemption(s)	7c-I	
MANUFACTURING		
Mfg Item Number	MMA7660FCR1	
Mfg Item Name	DFN 10 COL 3*3*0.9P0.5	
Version	ALL	
Weight	0.020100	
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
Exemptions in this part	7c-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
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%
Copper Lead Frame	0.0045						g					
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.004333	g	963300	96.33		215574	21.5574
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.000001	g	150	0.015		49	0.0049
Copper Lead Frame		Solvents, additives, and other materials	Phosphorus	7723-14-0		0.000001	g	240	0.024		49	0.0049
Copper Lead Frame		Metals	Iron, metal	7439-89-6		0.000102	g	22560	2.256		5074	0.5074
Copper Lead Frame		Metals	Nickel, metal	7440-02-0		0.000052	g	11500	1.15		2587	0.2587
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.000005	g	1000	0.1		248	0.0248
Copper Lead Frame		Metals	Zinc, metal	7440-66-6		0.000006	g	1250	0.125		298	0.0298
Non-Conductive Epoxy/Adhesive	0.0001						g					
Non-Conductive Epoxy/Adhesive		Metals	Aluminum Oxides (Al2O3)	1344-28-1		0.00007	g	697144	69.7144		3482	0.3482
Non-Conductive Epoxy/Adhesive		Solvents, additives, and other materials	Proprietary Material-Other aromatic amines	-		0.000005	g	51428	5.1428		248	0.0248
Non-Conductive Epoxy/Adhesive		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.00002	g	200000	20		995	0.0995
Non-Conductive Epoxy/Adhesive		Plastics/polymers	Proprietary Material-Other polymers	-		0.000005	g	51428	5.1428		248	0.0248
Bonding Wire	0.0002						g					
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0002	g	1000000	100		9950	0.995
Die Encapsulant	0.0141						g					
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.000423	g	30000	3		21044	2.1044
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.000042	g	3000	0.3		2089	0.2089
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.000423	g	30000	3		21044	2.1044
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.013212	g	937000	93.7		657322	65.7322
Silicon Semiconductor Die	0.0006						g					
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000012	g	20000	2		597	0.0597
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.000588	g	980000	98		29253	2.9253
Pb Glass Fit Semiconductor Di	0.0006				7c-I		g					
Pb Glass Fit Semiconductor Di		Metals	Lead titanium oxide (PbTiO3)	12060-00-3		0.000006	g	10381	1.0381		298	0.0298
Pb Glass Fit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.000006	g	9943	0.9943		298	0.0298
Pb Glass Fit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monoisobutyrate	25265-77-4		0.000006	g	9943	0.9943		298	0.0298
Pb Glass Fit Semiconductor Di		Glass	Silicon, doped	-		0.000582	g	969733	96.9733		28955	2.8955

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 v0.9 Form	http://www.freescal.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v0.9_MCD_Template.pdf
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/MMA7660FCR1_IPC1752_v09.xml

http://www.freescale.com/mcds/MMA7660FCR1_IPC1752_v11.xml

http://www.freescale.com/mcds/MMA7660FCR1_IPC1752A.xml