

PART INFORMATION

Mfg Item Number	MMA8652FCR1
Mfg Item Name	DFN 10 2*2*0.95 P0.4

SUPPLIER

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2015-03-09
Response Document ID	008HA1.10
Contact Name	Freescale Semiconductor Inc
Contact Title	Product Technical Support
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Authorized Representative	Daniel Binyon
Representative Title	EPP Customer Response
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URL for Additional Information	www.freescale.com

DECLARATION

EU RoHS	Yes
Pb Free	No
HalogenFree	Yes
Plating Indicator	e4
EU RoHS Exemption(s)	7c-l

MANUFACTURING

Mfg Item Number	MMA8652FCR1
Mfg Item Name	DFN 10 2*2*0.95 P0.4
Version	ALL
Weight	0.014400
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	1
Peak Processing Temperature	260 C
Max Time at Peak Temperature	40 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	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	<p>6(a) : Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight</p> <p>6(b) : Lead as an alloying element in aluminium containing up to 0.4% lead by weight</p> <p>6(c) : Copper alloy containing up to 4% lead by weight</p> <p>7(a) : Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)</p> <p>7(b) : Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission, and network management for telecommunications</p> <p>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</p> <p>7(c)-II : Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher</p> <p>7(c)-III : Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC</p> <p>7(c)-IV : Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors</p> <p>15 : Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages</p>

MATERIAL COMPOSITION

Homogeneous Material	Weight	SubstanceClass	Substance	CAS	Exemption	SubstanceWeight	UoM	SubPart PPM	SubPart%	ARTICLEPPM	ARTICLE%
Bonding Wire	0.0001						g				
Bonding Wire		Metals	Gold, metal	7440-57-5		0.0001	g	1000000	100	6944	0.6944
Non-conductive Epoxy	0.0007						g				
Non-conductive Epoxy		Solvents, additives, and other materials	Bisphenol A	80-05-7		0.0000035	g	4996	0.4996	243	0.0243
Non-conductive Epoxy		Plastics/polymers	Epikote 862	28064-14-4		0.0000694	g	99915	9.9915	4856	0.4856
Non-conductive Epoxy		Plastics/polymers	4,4'-isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.0000035	g	4996	0.4996	243	0.0243
Non-conductive Epoxy		Plastics/polymers	Phenol, polymer with formaldehyde	9003-35-4		0.0000694	g	99915	9.9915	4856	0.4856
Non-conductive Epoxy		Glass	Proprietary Material-Other silica compounds	-		0.0001399	g	10983	1.0983	571	0.0571
Non-conductive Epoxy		Plastics/polymers	Proprietary Material-Other Non-halogenated Epoxy resins	-		0.00046919	g	670280	67.028	32582	3.2582
Non-conductive Epoxy		Solvents, additives, and other materials	4,4'-Diaminodiphenylsulfone	80-08-0		0.0000694	g	99915	9.9915	4856	0.4856
Copper Lead Frame	0.0033						g				
Copper Lead Frame		Metals	Copper, metal	7440-50-8		0.00312108	g	945780	94.578	216741	21.6741
Copper Lead Frame		Metals	Gold, metal	7440-57-5		0.00000997	g	295	0.0295	67	0.0067
Copper Lead Frame		Solvents, additives, and other materials	Silicon	7440-21-3		0.00002354	g	7134	0.7134	1634	0.1634
Copper Lead Frame		Metals	Magnesium, metal	7439-95-4		0.00000568	g	1722	0.1722	394	0.0394
Copper Lead Frame		Nickel (external applications only)	Nickel	7440-02-0		0.0011464	g	44363	4.4363	10196	1.0196
Copper Lead Frame		Metals	Palladium, metal	7440-05-3		0.00000162	g	491	0.0491	112	0.0112
Copper Lead Frame		Metals	Silver, metal	7440-22-4		0.00000071	g	215	0.0215	49	0.0049
Die Encapsulant	0.0047						g				
Die Encapsulant		Arsenic/Arsenic Compounds	Arsenic	7440-39-2		0.00000003	g	6	0.0006	2	0.0002
Die Encapsulant		Bismuth/Bismuth Compounds	Bismuth	7440-69-9		0.00004719	g	10040	1.004	3277	0.3277
Die Encapsulant		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.00035391	g	75300	7.53	24577	2.4577
Die Encapsulant		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.00001416	g	3012	0.3012	983	0.0983
Die Encapsulant		Lead/Lead Compounds	Lead	7439-92-1		0.00000008	g	16	0.0016	5	0.0005
Die Encapsulant		Solvents, additives, and other materials	Other organic phosphorous compounds	-		0.00001416	g	3012	0.3012	983	0.0983
Die Encapsulant		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.00025953	g	55219	5.5219	18022	1.8022
Die Encapsulant		Glass	Silica, vitreous	60676-86-0		0.00401094	g	853395	85.3395	278551	27.8551
Silicon Semiconductor Die	0.0028						g				
Silicon Semiconductor Die		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.000056	g	20000	2	3888	0.3888
Silicon Semiconductor Die		Glass	Silicon, doped	-		0.002744	g	980000	98	190555	19.0555
Pb Glass Frit Semiconductor Di	0.0028						g				
Pb Glass Frit Semiconductor Di		Lead/Lead Compounds	Lead (II) titanate	12090-00-3	7c-I	0.00002907	g	10381	1.0381	2018	0.2018
Pb Glass Frit Semiconductor Di		Glass	Fibrous-glass-wool	65997-17-3		0.00002784	g	9943	0.9943	1933	0.1933
Pb Glass Frit Semiconductor Di		Solvents, additives, and other materials	2,2,4-trimethyl-1,3-pentanediol-1-monoisobutyrate	25265-77-4		0.00002784	g	9943	0.9943	1933	0.1933
Pb Glass Frit Semiconductor Di		Glass	Silicon, doped	-		0.00271525	g	969733	96.9733	188559	18.8559

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](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/mcdfs/MMA8652FCR1_IPC1752_v11.xml

http://www.freescale.com/mcdfs/MMA8652FCR1_IPC1752A.xml