

**PART INFORMATION**

Mfg Item Number	MPC8544CVTALFA
Mfg Item Name	FCPBGA 783 29SQ2.7P1.0

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2016-04-22
Response Document ID	8440A1.17
Contact Name	Freescale Semiconductor Inc
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**DECLARATION**

EU RoHS	Yes
Pb Free	No
HalogenFree	Yes
Plating Indicator	e2
EU RoHS Exemption(s)	15

**MANUFACTURING**

Mfg Item Number	MPC8544CVTALFA
Mfg Item Name	FCPBGA 783 29SQ2.7P1.0
Version	ALL
Weight	3.461700
UoM	g
Unit Volume	EACH
J-STD-020 MSL Rating	3
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	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	<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%
Capactor_0306	0.0794						g				
Capactor_0306		Metals	Copper, metal	7440-50-8		0.0109572	g	138000	13.8	3165	0.3165
Capactor_0306		Nickel (external applications only)	Nickel	7440-02-0		0.015483	g	195000	19.5	4472	0.4472
Capactor_0306		Metals	Tin, metal	7440-31-5		0.0010322	g	13000	1.3	298	0.0298
Capactor_0306		Metals	Barium titanate	12047-27-7		0.0519276	g	654000	65.4	15000	1.5
Capactor Solder Paste	0.0463						g				
Capactor Solder Paste		Metals	Copper, metal	7440-50-8		0.0002315	g	5000	0.5	66	0.0066
Capactor Solder Paste		Lead/Lead Compounds	Lead	7439-92-1		0.0000384	g	83	0.0083	1	0.0001
Capactor Solder Paste		Metals	Silver, metal	7440-22-4		0.001389	g	30000	3	401	0.0401
Capactor Solder Paste		Metals	Tin, metal	7440-31-5		0.04467566	g	964917	96.4917	12905	1.2905
Solder Balls - Pb Free, Sn/Ag	0.5481						g				
Solder Balls - Pb Free, Sn/Ag		Metals	Silver, metal	7440-22-4		0.0191835	g	35000	3.5	6541	0.5541
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.5289165	g	965000	96.5	152790	15.279
High Pb Bumped Semiconductor D	0.1284				15		g				
High Pb Bumped Semiconductor D		Lead/Lead Compounds	Lead	7439-92-1		0.01209233	g	94177	9.4177	3493	0.3493
High Pb Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.00010593	g	825	0.0825	30	0.003
High Pb Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.00063635	g	4956	0.4956	183	0.0183
High Pb Bumped Semiconductor D		Metals	Titanium, metal	7440-32-6		0.00000539	g	42	0.0042	1	0.0001
High Pb Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0011556	g	9000	0.9	333	0.0333
High Pb Bumped Semiconductor D		Glass	Silicon, doped	-		0.1144044	g	891000	89.1	33048	3.3048
Substrate Assembly, Halogen-fr	2.6307				15		g				
Substrate Assembly, Halogen-fr		Metals	Barium sulfate	7727-43-7		0.02903767	g	11038	1.1038	8388	0.8388
Substrate Assembly, Halogen-fr		Metals	Copper, metal	7440-50-8		1.03888973	g	394910	39.491	300128	30.0128
Substrate Assembly, Halogen-fr		Plastics/polymers	Epikote 862	28064-14-4		0.21906102	g	83271	8.3271	63281	6.3281
Substrate Assembly, Halogen-fr		Plastics/polymers	Formaldehyde, polymer with 2-methylphenol, glycidyl ether	64425-89-4		0.0449876	g	17101	1.7101	12995	1.2995
Substrate Assembly, Halogen-fr		Lead/Lead Compounds	Lead	7439-92-1		0.00743173	g	2825	0.2825	2146	0.2146
Substrate Assembly, Halogen-fr		Plastics/polymers	Phenol, polymer with formaldehyde	9003-36-4		0.11962056	g	45471	4.5471	34555	3.4555
Substrate Assembly, Halogen-fr		Glass	Fibrous glass-wool	65997-17-3		0.73268415	g	278513	27.8513	211654	21.1654
Substrate Assembly, Halogen-fr		Glass	Silicon dioxide	7631-86-9		0.0628027	g	23873	2.3873	18142	1.8142
Substrate Assembly, Halogen-fr		Metals	Tin, metal	7440-31-5		0.0126563	g	4811	0.4811	3656	0.3656
Substrate Assembly, Halogen-fr		Solvents, additives, and other materials	Other Aromatic carbonyl compounds	-		0.0046816	g	1772	0.1772	1346	0.1346
Substrate Assembly, Halogen-fr		Metals	Aluminum Hydroxide	21645-61-2		0.35886694	g	136415	13.6415	103667	10.3667
Underfill	0.0288						g				
Underfill		Solvents, additives, and other materials	4,4'-Diamino-3,3'-diethyl-diphenylmethane	19900-65-3		0.003168	g	110000	11	915	0.0915
Underfill		Bismuth/Bismuth Compounds	Bismuth nitrate	10361-44-1		0.0000288	g	1000	0.1	8	0.0008
Underfill		Bismuth/Bismuth Compounds	Bismuth trioxide	1304-76-3		0.0002304	g	8000	0.8	66	0.0066
Underfill		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-46-6		0.004032	g	140000	14	1164	0.1164
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00288	g	100000	10	831	0.0831
Underfill		Solvents, additives, and other materials	Carbon Black	1333-86-4		0.0000288	g	1000	0.1	8	0.0008
Underfill		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.001152	g	40000	4	332	0.0332
Underfill		Glass	Silica, vitreous	60676-86-0		0.01728	g	600000	60	4991	0.4991

## LINKS

MCD LINK	
NXP website	<a href="http://www.nxp.com">http://www.nxp.com</a>
GENERAL ENVIRONMENTAL COMPLIANCE LINKS	
RoHS signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ROHS-DECLARATION.pdf</a>
China RoHS	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/china-rohs:ENV_CHINA_ROHS_STRATEGY</a>
REACH signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-REACH-STATEMENT.pdf</a>
ELV signed letter	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-ELV-STATEMENT.pdf</a>
Conflict Minerals statement	<a href="http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf">http://www.nxp.com/files/corporate/doc/support_info/NXP-STATEMENT-CONFLICT-MINERALS.pdf</a>
NXP ENVIRONMENTAL INFORMATION	
Environmental Compliance website	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization:ABUENVPRFPRDX</a>
FAQ	<a href="http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ">http://www.nxp.com/about/corporate-responsibility/environmental-compliance-organization/eco-product-faqs:ENVIRON_FAQ</a>
Technical Service Request	<a href="http://www.nxp.com/support/sales-and-support:SUPPORTHOME">http://www.nxp.com/support/sales-and-support:SUPPORTHOME</a>
LINKS TO BLANK IPC1752 FORMS	
Blank IPC1752 v1.1 Form	<a href="http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf">http://www.NXP.com/files/abstract/corporate/ehs_epp/IPC-1752-2_v1.1_MCD_Template.pdf</a>

IPC1752 XML LINKS

[http://www.freescale.com/mcdfs/MPC8544CVTALFA\\_IPC1752\\_v11.xml](http://www.freescale.com/mcdfs/MPC8544CVTALFA_IPC1752_v11.xml)

[http://www.freescale.com/mcdfs/MPC8544CVTALFA\\_IPC1752A.xml](http://www.freescale.com/mcdfs/MPC8544CVTALFA_IPC1752A.xml)