

**PART INFORMATION**

Mfg Item Number	MPC8544CVJALFA
Mfg Item Name	FCPBGA 783 29SQ2.7P1.0

**SUPPLIER**

Company Name	Freescale Semiconductor Inc
Company Unique ID	14-141-7928
Response Date	2018-05-09
Response Document ID	8440A1.3
Contact Name	Freescale Semiconductor Inc
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**DECLARATION**

EU RoHS	Yes
Pb Free	Yes
HalogenFree	Yes
Plating Indicator	e2
EU RoHS Exemption(s)	

**MANUFACTURING**

Mfg Item Number	MPC8544CVJALFA
Mfg Item Name	FCPBGA 783 29SQ2.7P1.0
Version	ALL
Weight	3.336100
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	1 - Item(s) do not contain RoHS restricted substances per the definition above
Supplier Acceptance	Accepted
Signature	Daniel Binyon
Exemption List Version	2012/51/EU
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. piezoelectric 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	3284	0.3284
Capactor_0306		Nickel (external applications only)	Nickel	7440-02-0		0.015483	g	195000	19.5	4641	0.4641
Capactor_0306		Metals	Tin, metal	7440-31-5		0.0010322	g	13000	1.3	309	0.0309
Capactor_0306		Metals	Barium titanate	12047-27-7		0.0519276	g	654000	65.4	15565	1.5565
Capactor Solder Paste	0.0463						g				
Capactor Solder Paste		Metals	Copper, metal	7440-50-8		0.0002315	g	5000	0.5	69	0.0069
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	416	0.0416
Capactor Solder Paste		Metals	Tin, metal	7440-31-5		0.04467566	g	964917	96.4917	13391	1.3391
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	6750	0.675
Solder Balls - Pb Free, Sn/Ag		Metals	Tin, metal	7440-31-5		0.5289165	g	965000	96.5	158543	15.8543
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	949	0.0949
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	69	0.0069
Underfill		Plastics/polymers	1,6-Bis(2,3-epoxypropoxy) naphthalene	27610-48-6		0.004032	g	140000	14	1208	0.1208
Underfill		Plastics/polymers	Phenolic Polymer Resin, Epikote 155	9003-36-5		0.00288	g	100000	10	863	0.0863
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	345	0.0345
Underfill		Glass	Silica, vitreous	60676-86-0		0.01728	g	600000	60	5179	0.5179
Organic Substrate, Halogen-free	2.5051						g				
Organic Substrate, Halogen-free		Arsenic/Arsenic Compounds	Arsenic	7440-39-2		0.00001754	g	7	0.0007	5	0.0005
Organic Substrate, Halogen-free		Metals	Barium sulfate	7727-43-7		0.0105139	g	4197	0.4197	3151	0.3151
Organic Substrate, Halogen-free		Metals	Copper, metal	7440-50-8		0.6939202	g	343045	34.3045	257611	25.7611
Organic Substrate, Halogen-free		Plastics/polymers	2,2'-(1-methylethylidene)bis(4,1-phenyleneoxyethylene)bisoxirane	1675-54-3		0.01701965	g	6794	0.6794	5101	0.5101
Organic Substrate, Halogen-free		Plastics/polymers	Other Epoxy resins	-		0.03935512	g	15710	1.571	11796	1.1796
Organic Substrate, Halogen-free		Plastics/polymers	Proprietary Material-Other Epoxy resins	-		0.10557243	g	42143	4.2143	31645	3.1645
Organic Substrate, Halogen-free		Lead/Lead Compounds	Lead	7439-92-1		0.00001002	g	4	0.0004	3	0.0003
Organic Substrate, Halogen-free		Plastics/polymers	4,4'-Isopropylidenediphenol-1-chloro-2,3-epoxypropane concentrate	25068-38-6		0.03611603	g	14417	1.4417	10825	1.0825
Organic Substrate, Halogen-free		Plastics/polymers	Proprietary Material-Other phenolic resins	-		0.06997496	g	27933	2.7933	20975	2.0975
Organic Substrate, Halogen-free		Glass	Fibrous-glass-wool	65997-17-3		0.76540224	g	305638	30.5638	229430	22.943
Organic Substrate, Halogen-free		Glass	Silicon dioxide	7631-86-9		0.18502671	g	73864	7.3864	55494	5.5494
Organic Substrate, Halogen-free		Metals	Silver, metal	7440-22-4		0.00057617	g	230	0.023	172	0.0172
Organic Substrate, Halogen-free		Metals	Tin, metal	7440-31-5		0.01886029	g	7409	0.7409	5563	0.5563
Organic Substrate, Halogen-free		Metals	Aluminum Hydroxide	21645-61-2		0.39589849	g	158037	15.8037	119671	11.9671
Organic Substrate, Halogen-free		Metals	Copper phthalocyanine	147-14-8		0.00188343	g	672	0.0672	504	0.0504
Pb-free Bumped Semiconductor D	0.1284						g				
Pb-free Bumped Semiconductor D		Nickel (external applications only)	Nickel	7440-02-0		0.000642	g	5000	0.5	192	0.0192
Pb-free Bumped Semiconductor D		Metals	Silver, metal	7440-22-4		0.00040446	g	3150	0.315	121	0.0121
Pb-free Bumped Semiconductor D		Metals	Tin, metal	7440-31-5		0.01115154	g	86850	8.685	3342	0.3342
Pb-free Bumped Semiconductor D		Solvents, additives, and other materials	Other miscellaneous substances (less than 5%)	-		0.0011556	g	9000	0.9	346	0.0346
Pb-free Bumped Semiconductor D		Glass	Silicon, doped	-		0.1150464	g	896000	89.6	34485	3.4485

## 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/MPC8544CVJALFA\\_IPC1752\\_v11.xml](http://www.freescale.com/mcdfs/MPC8544CVJALFA_IPC1752_v11.xml)

[http://www.freescale.com/mcdfs/MPC8544CVJALFA\\_IPC1752A.xml](http://www.freescale.com/mcdfs/MPC8544CVJALFA_IPC1752A.xml)